







*To the moste high, and excellent  
Princes, Elizabeth, by the grace of God, Queene of Eng-  
lande, Fraunce, and Irelande, defender of the  
faith, and of the Church of Englande, and  
Irelande, on yearth next vnder God,  
the supreme Gouvernour.*



Lthough commonly euery  
man, most woorthy & renown-  
med Soueraigne, seeketh  
specially to commend and  
extolle the thing, wherevnto  
he seeth himselfe naturally  
bent and inclined, yet all such  
partiality and priuate affectis  
laid aside, it is to be thought  
(that for the defence, mainte-  
nance, and aduancement of a Kingdome, or Common-  
weale, or for the good and due obseruation of peace, and  
administration of iustice in the same) no one thing to be  
more profitable, necessarye, or more honourable, then  
the knowledge of seruice in warre, and deedes of armes,  
because considering the ambition of the worlde, it is im-  
possible for any Reame or dominion, long to continue  
free in quietnesse and sauegard, where the defence of the  
sworde is not alwayes in a readinesse. For like as the  
Greekes, being occupied about trifling matters, taking  
pleasure in resiting of Comedies, and such other vaine  
things, altogether neglecting Partial feates, gaue oc-  
casion to Philip king of Macedonia, father to Alexander  
the Great, to oppresse & to bring them in seruitude, vn-  
der his subiection: euen so vndoubtedly, liberty will not  
be kept, but men shall be troden vnder foote, & brought  
to most horrible miserie and calamitie, if they giuing  
them selues to pastimes & pleasure, forsake the iust re-  
garde of their owne defence, & sauegard of their coutrie,  
which in trespas all regiment, chiefly consisteth in war-  
like skilfulnesse. And therfore the auncient Capitaynes  
a. y. and

## *The Epistle.*

and mightie Conquerours, so long as they flourished, did  
deuise with most great diligence, all maner of wayes, to  
bring their men to the perfecte knowledge of what so e-  
uer thing appertayned to the warre, as manifestly ap-  
peareth by the warlike games, whiche in olde time the  
Princes of Grecia ordained, vpon the mount Olympus,  
and also by the orders and exercises, that the aunient  
Romains vsed in sundry places, and specially in Cam-  
po Martio, and in their wonderfull sumptuous Thea-  
ters, which chiefly they buylded to that purpose. Wher-  
by they not onely made their Souldiours so expert, that  
they obtayned with a few, in fighting againste a great  
honge multitude of enemies, such maruailous victories,  
as in many credible Histories are mencioned, but also  
by the same meanes, their vnarmed and rascalle people  
that followed their Campes, got such vnderstanding in  
the seates of warre, that they in the day of battail, being  
left destitute of succour, were able without anye other  
helpe, to set them selues in good order, so: their defence a-  
gainst the enemye, that would seeke to hurt them, and in  
such dangerous times, haue done their countrie so good  
service, that verie often by their helpe, the aduersaries  
haue bene put to flight, and fields most happely wonne.  
So that the antiquitie esteemed nothing moze happy in  
a common weale, then to haue in the same manye men  
skilfull in warlike affaires: by meanes whereof their  
Empire continually enlarged, & most wonderfully and  
triumphantly prospered. For so long as men for their  
valiauntnesse, were then rewarded and had in estima-  
cion, glad was he that coulde finde occasion to venter, yea  
and spende his life, to benefite his countrie: as by the  
manly actes that Marcus Curcius, Oracius Cocles, & Gai-  
us Mucius did for the sauegarde of Rome, and also by o-  
ther innumerable like examples, doth plainly appeare.  
But when through long & continual peace, they began to  
be altogether giuen to pleasure and delicatenes, little re-  
gar-



## *Dedicatorie.*

garding Partiall seates, noꝛ such as were expert in the practise thereof: Their dominions and estates, did not so much before increase & prosper, as then by such means and oversight, they sodainly fell into decay & utter ruine. For such truly is the nature and condicion, both of peace and warre, that where in gouernement, there is not had equal consideration of them both, the one in fine, both woꝛke and induce, the others obliuion and utter abolition. Wherefoꝛe, with the necessitie of the science of warres is so great, and also the necessarie vie thereof so manifest, that euen Lady Peace her selfe, both in maner from thence craue her chiefe defence and preservation, and the woꝛthinnesse moꝛeouer, and honour of the same so great, that as by pꝛoofe we see, the perfecte gloꝛye thereof, can not easely finde roote, but in the hartes of most noble couragious & manlike personages. I thought most excellent Princes, I coulde not either to the speciall gratefying of your highnesse, the vniuersal delight of all studious gentlemen, oꝛ the common vtilitie of the publike wealth, imploye my labours moꝛe pꝛofitable in accomplishing of my duetie and good will, then in setting foꝛth some thing, that might induce to the augmenting and increase of the knowledge thereof: in especiall the example of your highnesse most politike gouernements ouer vs, giuing plaine testimonie of the wonderfull pꝛudent desire that is in you, to haue your people instructed in this kinde of service, as well foꝛ the better defence of your highnesse, them selues, and their countrie, as also to discourage therby, and to be able to resist the malignitie of the enemy, who otherwise would seake peraduenture, to inuade this noble realme oꝛ kingdome.

When therefore about tenne yeres past, in the Emperours warres against the Moꝛes, & certayne Turkes being in Barberie, at the siege and winning of Calibbia, Monesterio and Affrica, I had as well foꝛ my further instruction in those affaires, as also the better to

## *The Epistle*

acquaint mee with the Italian tongue, reduced into English, the booke called The arte of VVarre, of the famous and excellent Nicholas Machiavel, which in times past he being a counsaillour, and Secretarie of the noble Citie of Florence, not without his great laude and praise did write: and hauing lately againe, somewhat perused the same, the which in such continuall boyles and vnquietnesse, was by mee translated, I determined with my selfe, by publishing therof, to bestowe as great a gift (since greater I was not able) amongst my countrie men, not expert in the Italian tongue, as in like works I had seene befoze mee, the Frenchemen, Dutchemen, Spaniardes, and other fo:reigne nations, most louingly to haue bestowed amongst theirs. The rather vndoubtedly, that as by priuate reading of y<sup>e</sup> same booke, I then felt my selfe in that knowledge maruailously holpen & increased, so by communicating the same to many, our Englishmen finding out the ordering and disposing of exploitdes of warre therein contayned, the aide and direction of these plaine and brieue preceptes, mighte no lesse in knowledge of warres become incomparable, then in p<sup>r</sup>oues also and exercise of the same altogether inuincible: which my translation most gracious Soueraigne, together with such other things, as by me hath bene gathered, I thought good to adde therunto, I haue presumed to dedicate vnto your highnes: not onely because the whole charge and furniture of warlike counsailes and preparacions, being determined by the arbitrement of Soueraiours and Princes, the treatise also of like effect shoulde in like maner as of righte, depende vpon the protection of a most worthe and noble Patronesse, but also that the discourse it selfe, & the worke of a fo:raign author, vnder the passport & safecōduict of your highnes most noble name, might by speciall authoritie of the same, winne amongst your Maiesties subiectes, much better credite and estimation. And if most mighty

Queens

## Dedicatorie.

Quene, in this kinde of Philosophie (if I may so terme it) graue & sage counsailes, learned and wittye p̄cepts, or polittike and prudent admonitions, oughte not to be accounted the least and basest iewels of weale publike. Then dare I boldly affirme, that of many straungers, whiche from fozeyn countries, haue heretofore in this your Maiesties realme arriued, there is none in comparison to be preferred, befoze this worthy Florentine and Italian, who hauing freely without anye gaine of exchange (as after some acquaintaunce and familiaritie will better appeare) brought with him most ritche, rare and plentifull Treasure, shall deserue I trust of all good English hartes, most louingly and friendly to be intertayned, imbraced and cherished. Whose newe Englishe apparel, howe so euer it shall seme by me, after a grosse fashion, moze fitly appoynted to the Campe, then in nice termes attired to the Carpet, and in course clothing rather put forth to battaile, then in any braue shewe prepared to the banquet, neuerthelesse my good will I trust, shall of your grace be taken in good part, hauing fashioned the praise of my rude stile, euen according to the purpose of my trauaile, which was rather to profite the desirous man of warre, then to delight the eares of the fine Rhetorician, or daintie curious scholeman. Moste humbly beseeching your highnes, so to accept my labour herin, as the first fruits of a poore souldiours studie, who to the vttermost of his smal power, in the seruice of your most gracious maiestie, and of his countrie, will at all times, according to his bounden duetie and allegaunce, promptly yeld him self to any labour, trauaile, or danger, what so euer shall happē. Praying in the meane season the almightie God, to giue your highnes in long prosperous raigne, perfect health, desired tranquillitie, and against all your enemies, lucky and ioyfull victorie.

Your humble subiect and dayly  
orator, Peter VVhitehorne.





# The Proheme of Nicholas Ma.

chiaeuel, Citezen and Secretary of Florence, vpon  
his booke of the *Arte of vuarre*, vnto Lau-  
rence Philippe Strozze, one of  
the Nobilitie of  
Florence.



Here haue Laurence, manye  
helde, and do holde this opiniõ,  
that ther is no maner of thing,  
which lesse agreeth þ one with  
the other, noz that is so much  
vnlke, as the ciuill life, to the  
Doulbours. Wherby it is of-  
ten sene, that if anye deter-  
mine in the exercise of that  
kinde of seruice to preuaile,

that incontinent he doth not onely chaunge in apparell,  
but also in custome and maner, in voyce, and from the  
fashion of all ciuill vse, he doth alter: for that he thinketh  
not meete to cloth with ciuill apparell, him who will be  
redy, and prompt to all kinde of violence, noz the ciuil cu-  
stomes, and vsages may that man haue, the which iud-  
geþ both those customes to be effeminate, and those vs-  
ages not be agreable to his profession: for it seemes  
not conuenient for him to vse the ciuil gesture and ordi-  
narie wordes, who with facing and blasphemies, will  
make afraied other men: the which causeth in this time,  
suche opinion to be most true. But if they shoulde con-  
sider thauuncient orders, there shoulde nothing be founde  
moze vnited, moze confirmable, and that of necessitye  
ought to loue so much the one the other, as these: for as  
muche as all the artes that are ordeyned in a common  
weale, in regarde or respect of common profite of men,  
all the orders made in the same, to liue with feare of  
the Lawe, and of God, shoulde bee wayne, if by force of

## The Proheme.

armes their defence were not prepared, which well ordeyned, do maintaine those also which be not well ordeyned. And likewise to the contrarie, the good orders, without the Souldiours helpe, no lesse or otherwise do disorder, then the habitation of a sumptuous & royall palais, although it were deckt with golde and precious stones, when without being couered, shoulde not haue wherewith to defende it from the raine. And if in what so euer other orders of cities and kingdomes there hath bene vsed all diligence for to maintayne men faithfull, peaceable, and full of the feare of God, in the seruice of warre, it was doubled: for in what man ought the contrarie to seeke greater faith, then in him, who muste promise to die for the same? In whō ought there to be more loue of peace, then in him, whiche onely by the warre may be hurt? In whom ought there to be more feare of God, then in him, which euery day committing him self to infinite perilles, hath most neede of his helpe? This necessitie considered well, both of them that gaue the lawes to Empires, and of those that to the exercise of seruice were appointed, made by the life of Souldiours, of other men was praised, and with all studie followed and imitated. But the orders of seruice of warre, being altogether corrupted, and a great waye from the aunciente maners altered, there hath growen these sinisterous opinions, which maketh men to hate the warlike seruice, and to shie the conuersation of those that do exercise it. Albeit I iudging by the same, that I haue seene & read, that it is not a thing impossible, to bring it againe to the aunciente maners, and to giue it some fashion of the vertue passed, I haue determined to the entent not to passe this my ydle time, without doing some thing, to write that which I do vnderstande, of the arte of warre, to the satisfieng of those, who are louers of auncient artes. And although it be a bolde thing to intreate of the same matter, wherof otherwise I haue made no profession,



## The Proheme. *Fol.ij.*

Non, notwithstanding I beleeue it is no error to occupie with wordes a degré, the which manye with greater presumption with their deedes haue occupied: for as muche as the errors that I maye happen to make by writing, may be without harme to any man corrected: but those the whiche of them be made in doing, can not be knowen without the ruine of Empires. Therefore Laurence you ought to consider the qualitie of this my labour, and with your iudgement to giue it that blame, or that praise, as shall seme vnto you it hath deserved. The which I sende vnto you, as well to shew my selfe gratefull, although my abilitie reche not to the benefites, which I haue receyued of you, as also for that being the custome to honour with like workes them, who for nobilitie, riches, wisdom, and liberalitie do shine: I knowe you for riches, and nobilitie, not to haue manys peeres, for wisdom few, and for liberalitie none.

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F I N I S.

27.





Fol.ij.

*The firste booke of the arte of warre,*  
*of Nicholas Machiavel, Citezen and Secretaris*  
*of Florence, unto Laurence Philip Strozze,*  
*one of the Nobilitie of*  
*Florence.*



Orasmuche as I beleue that after death, all men maye be praised without charge, all occasion and suspect of flattery being taken away, I shall not doubt to praise oure Cosimo Ruchellay, whose name was neuer remembred of mee without teares, hauing knowen in him those condicions,

the which in a good friende or in a Citezen, might of his friends, or of his countrey, be desired: so that I do not know what thing was so much his, not excepting any thing (sauing his soule) which so his friends willingly of him should not haue bene spent: I know not what enterpryse should haue made him afraied, where the same should haue bene knowen to haue bene for the benefit of his countrey. And I do plainly confesse, not to haue met amongst so many men, as I haue knowen, and practised withall, a man, whose minde was more inflamed then his, vnto great and magnificent thinges. For he lamented not with his friends of any thing at his death, but because he was bozne to die a young man within his owne house, befoze hee had gotten honour, and according to his desire, holpen any man: so that he knewe, that of him could not bee spoken other, sauing that there should be dead a good friende. Yet it resteth not for this, that we, and what soener other that as we byd knowe him, are not able to testifie (seeing his woorkes do not appeare) of his laudable qualities. True  
it



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it is , that fortune was not fo; all this, so much his enemye , that it leste not some briefe recorde of the readinesse of his wit , as doeth declare certayne of his writings , and setting forth of amorous verses , wherein (although he were not in loue) yet fo; that he would not consume time in vayne , till vnto profounder studies fortune shoalde haue broughte him, in his youthfull age he exercised himselfe. Wherby most playnly maye be comprehended, with howe much felicitie hee dyd describe his conceiptes, and howe much fo; Poetrie he shoalde haue bene esteemed, if the same fo; the ende thereof, had of him bene exercised. Fortune hauing therefore depriued vs from the vse of so great a friende, mee thinketh there can be founde no other remedy, then as muche as is possible , to seeke to inioye the memorye of the same , and to repeate suche thinges as hath bene of him either wittely sayde , or wisely disputed. And fo; as muche as there is nothing of him moze fresh, then the reasoning , the which in his last dayes Signior Fabritio Collonna , in his Orchard had with him , where largely of the same gentelman were disputed matters of warre, both wittly and prudently , fo; the mosse parte of Cosimo demaunded , I thought good fo; that I was presente there with certayne other of our friendes , to bring it to memorye , so that reading the same , the friendes of Cosimo , which thither came, might renewe in their mindes , the remembraunce of his vertue: and the other parte being so;pe fo; their absence, might partlye learne hereby manye thinges profitable, not onely to the life of Souldiours , but also to ciuill mens liues, whiche granely of a mosse wise man was disputed. Therefore I saye, that Fabritio Collonna retourning out of Lombardie , where long time greatlye to his glorye , he had serued in the warres the catholique king , he determined , passing by Florence, to rest him selfe certayne dayes in the same Citie , to visite

visite the Dukes excellencie, and to see certayne gentlemen, whiche in times past he had bene acquainted withall. For which cause, vnto Cosimo it was thought best to bid him into his Orchard, not so much to vse his liberalitie, as to haue occasion to talke with him at leisure, and of him to vnderstande and to learne diuers things, according as of such a man may be hoped for, seeing to haue occasion to spend a day in reasoning of such matters, whiche to his minde shoulde best satisfie him. Then Fabritio came, according to his desire, and was receyued of Cosimo together, with certayne of his true friends, amongst whom were Zanoby Buondelmonti, Baptiste Palla, and Luigi Allamanni, all young men loued of him, and of the very same studies moste ardent, whose good qualities, for as muche as euery day, and at euery houre they do praise them selues, we will omit. Fabritio was then according to the time & place honoured, of all these honours, that they could possible deuise: But the banquetting pleasures being passed, & the table taken vp, & all preparation of feastinges consumed, the which are sone at an end in sight of great men, who to honorable studies haue their mindes set, the day being long, and the heate muche, Cosimo iudged for to contente better his desire, that it were well done, taking occasion to auoyde the heate, to bring him into the moste secreete, and shadowest place of his garden.

Where they being come, and caused to sit, some vpon herbes, some in the coldest places, other vpon litle seats whiche there was ordeyned, vnder the shadowe of most high trees, Fabritio praiseth the place, to be delectable, and particularly considering the trees, and not knowing some of them, he did stand musing in his minde, where of Cosimo being a ware, said, you haue not peradventure bene acquainted with some of these sortes of trees: But do not maruaile at it, for as muche as there be some, that were moze esteemed of the antiquitie, then they

How Senior Fabritio Collonna & other gentlemen being together in a garden, entered into talke of matters of warre.

## *The first Booke of*

they are commonly nowe a dayes : and he tolde him the names of them , and howe Barnardo his graundfather dyd trauaile in such kinde of planting: Fabritio replied, I thought it should be the same you saye, and this place, and this study, made me to remember certayne Pzintres of the Kingdome of Naples, which of these auncient tillage and shadowe do delight. And staying vpon this talke, and somewhat standing in a studie, sayde mozeouer, if I thought I shoulde not offende, I would tell my opinion, but I beleue I shall not, communing with friends, and to dispute of thinges, and not to condempne them. How much better they should haue done (be it spoken without displeasure to anye man) to haue soughte to bee like the antiquitie in thinges strong, and sharpe, not in the delicate and soft: and in those that they dyd in the sunne, not in the shadowe: and to take the true and perfect maners of the antiquitie: not those that are false and corrupted: so that when these studies pleased my Romaynes, my countrye fell into ruine: Unto which Cosimo answered. But to auoide the tediousnesse to repeat so many times he sayde, and the other answered, there shalbe onely noted the names of those that speakes, without rehearsing other.

Then Cosimo sayde, you haue opened the waye of a reasoning, whiche I haue desired, and I praye you that you will speake without respect, so that, that I without respect will aske you, and if I demanding, or replying shall excuse, or accuse anye, it shall not be to excuse, or accuse, but to vnderstande of you the truth.

Fabritio. And I shall be very well contented to tell you that, which I vnderstande of all the same that you shall aske me, the which if it shall be true, or no, I will repoyte mee to your iudgemente: and I will bee glad that you aske mee, so that I am to learne, as well of you in asking mee, as you of mee in answering you: so as muche as manye times, a wise demander, maketh



keth one to consider manye thing, and to knowe many o-  
ther, which without hauing bene demaunded, he shoulde  
neuer haue knowen. Cosimo. I will retourne to the same  
that you said firste, that my graundfather and those your  
Princes, shoulde haue done moze wisely, to haue resem-  
bled the antiquitie in harde things, then in the delicate, &  
I will excuse my part, soz that, the other I shall leaue to  
excuse soz you. I do not beleue that in this time was any  
man, that so much detested the liuing in ease, as he dyd,  
and that so much was a louer of the same hardnesse of  
life, which you prayse: notwithstanding he knewe not  
howe to bee able in person, noz in those of his sonnes to  
vse it, being bozne in so corrupte a worlde, where one  
that woulde digresse from the common vse, shoulde bee  
infamed and disdayned of euery man: considering that if  
one in the hottest day of Sommer being naked, shoulde  
wallow himselfe vpon the Sande, or in Winter in the  
most coldest monethes vpon the snowe, as Deogenes  
dyd, he shoulde be taken as a sole. If one (as the Spar-  
tans were wonte to do) shoulde nourishe his chyldren in a  
billage, making them to sleepe in the open ayre, to go with  
head and feete naked, to walke them selues in the colde  
water soz to harden them, to bee able to abide muche  
payne, and soz to make them to loue lesse life, & to feare  
lesse death, he shoulde be scozned, and soner taken as a  
wilde beast, then as a man. If there were seme also one,  
to nourishe himselfe with peason and beanes, and to de-  
spise golde, as Fabritio doth, he shoulde bee praised of few,  
and followed of none: so that he being afraied of this  
present maner of liuing, he left thauuncient facions, and  
the same, that he could with lesse admiration imitate in  
the antiquitie, he dyd.

Fabritio. You haue excused it in this parte moste  
strongly and surely you saie the trueth: but I did not  
speake so muche of this harde manner of liuyng, as of o-  
ther maners moze humaine, and whiche haue with the



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life now a daies greater cōfōrmittie. The which I do not beleue, y<sup>t</sup> it hath been difficult to bring to passe unto one, who is nobred amongst Princes of a Citie: for y<sup>t</sup> prouing wherof, I will neuer seeke other, then the example of the Romanes. Whose liues, if they were well cōsidered, & the orders of the same cōmon weale, there should therein be scene many things, not impossible to induce into a cōminalltie, so that it had in her any good thing. Cosi. What things are those, y<sup>t</sup> you would induce like vnto y<sup>t</sup> antiquitie. Fabritio. To honour, & to rewarde vertue, not to despise pouerty, to esteeme the maners and orders of warfare, to constrain the Citezens to loue one an other, to liue without sectes, to esteeme lesse the priuate, then the publike, and other like things, that easily might be with this time accompanied: the which maners are not difficult to bring to passe, when a man should well consider them, and enter therein by due meanes: for asmuche as in the same, the trueth so much appeareth, that euery cōmon wit, may easely perceyue it: which thing, who that ordeyneth, both plant trees, vnder the shadowe wherof, they abide moze happy, and moze pleasauntly, then vnder these shadowes of this godly garden. Cosimo. I will not speake any thing against the same that you haue said but I will leaue it to be iudged of those, whom easily can iudge, and I will tourne my communication to you, that is an accusar of them, the which in grane, and great doinges, are not followers of y<sup>t</sup> antiquitie, thinking by this way moze easely to be in my entent satisfied. Therfore, I would knowe of you wherof it groweth, that of the one side you condempne those, that in their doinges resemble not the antiquitie: Of the other, in the warre, which is your Arte, wherein you are iudged excellent, it is not scene, that you haue indeuoured your selfe, to bring the same to any suche ende, or anye thing at all resembled therein the auncient maners. Fabritio. You are happened vpon the point, where I looked: for that my talke de-

sero

serued no other question: no; I desired other: and albe-  
it that I could saue my selfe with an easie excuse, not  
withstanding for my more contentation, and yours, see-  
ing that the season beareth it; I will enter in much lon-  
ger reasoning. Those men, which will enterprize anye  
thing, ought first with all diligence to prepare them sel-  
ues, to be ready and apte when occasion serueth, to ac-  
complish that, whiche they haue determined to worke:  
and for that when the preparations are made craftelye,  
they are not knowen, there cannot be accused any mā  
of any negligence, if first it be not disclosed by the occa-  
sion: in the which working not, is after sene, either that  
there is not prepared so much as suffiseth, or that there  
hath not bene of any part therof thought vpon. And for  
as much as to mee there is not come any occasion to be  
able, to shewe the preparations made of mee, to reduce  
the service of warre into his auncient orders, if I haue  
not reduced it, I can not be of you, no; of other blamed:  
I beleue this excuse shoulde suffice for aunswere to  
your accusation. Cosimo. It shoulde suffice, when I  
were certaine, that the occasion were not come. Fabrio-  
tio. But for that I knowe, that you may doubt whe-  
ther this occasion hath bene come, or no; I will large-  
lye (when you with patience will heare mee) discourse  
what preparations are necessarye first to make, what  
occasion must growe, what difficultie doth let, that the  
preparacions helpe not, and why the occasion can not  
come, & how these thinges at ones, which seeme cōtrary  
endos, is most difficult, & most easie to do. Cos. You cannot  
do both to me, & vnto these other, a thing more thank-  
full then this. And if to you it shall not bee tedious to  
speke, vnto vs it shal neuer be grēuous to heare: but for  
asmuch as this reasoning ought to be long, I will with  
your license take helpe of these my friendes: & they, and  
I praye you of one thing, that is, that you will not be  
grēued, if some time with some question of impo-

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taunce, w<sup>ch</sup> interrupte you. Fabritio. I am most well contented, that you Cosimo with these other young men here, do aske mee: for that I beleue, that youthfulness, will make you louers of warlike things, and moze easie to beleue the same, that of mee shalbe sayd. These other, by reason of hauing nowe their head white, and for hauing vpon their backes their blood co<sup>g</sup>eled, parte of them are wont to be enemies of warre, parte vncorredable, as those, whom beleue, that times, and not the naughty maners, constrayne men to liue thus: so that safely aske you all of mee, and without respect: the whiche I desire, as well, for that I maye be vnto me a litle ease, as also for that I shal haue pleasure, not to leaue in your minde any doubt. I will begin at your wordes, where you saide vnto me, that in the warre, that is my arte, I had not indenuored to bring it to anye auncient ende: wherupon I say, as this being an art, wherby men of no maner of age can liue honestly, it can not be vsed for an arte, but of a common weale: or of a Kingdome: and the one and the other of these, when they be well ordeyned, will neuer consente to anye their Citezens, or Subiectes, to vse it for anye arte, nor neuer anye good man doeth exercise it for his particulare arte: for as muche as good he shall neuer be indged, whome maketh an exercise thereof, where purposing alwayes to gaine thereby, it is requisite for him to be rauening, deceptfull, violente, and to haue manye qualities, the whiche of necessitie maketh him not good: nor those men can not, whiche vse it for an arte, as well the great as the lesse, be made otherwise: for that this Arte doeth not nourishe them in peace. Wherefore they are constrained, either to thinke that there is no peace, or so muche to p<sup>re</sup>uayle in the time of warre, that in peace they maye be able to keepe them selues: and neither of these two thoughtes happeneth in a good man: for that in minding to be able to finde him selfe at all times

¶ Why a good man ought neuer to vse the exercise of armes, as his Arte.



times, do growe robberies, violence, slaughters, whiche suche Souldiours make as well to the friendes, as to the enemies: and in minding not to haue peace, there groweth deceptes, which the Capitaynes vse to those, which hire them, to the entent the warre may continue, and yet though the peace come often, it happeneth that the Captaynes being depriued of their stipendes, and of their licencious living, they erecte an ensigne of aduentures, and without anye pitie they put to sacke a Province. Haue not you in memoire of your affaires, howe that being manye Souldiours in Italie without wages, because the warre was ended, they assembled together manye companies, and went taxing the towne, and sacking the countrie, without being able to make anye remedy: Haue you not read, that the Carthagenes souldiours, the first warre being ended which they had with the Romanes, vnder Matho, and Spendio, two Capitaynes, rebelliously constituted of them, made more perillous warre to the Carthagenes, then the same which they had ended with the Romanes: In the time of our fathers, Fraunces Sforza, to the entent to be able to liue honourable in the time of peace, not onely beguiled the Millenars, whose souldiour he was, but he tooke from them their libertie and became their Prince. Like vnto him hath bene all the other Souldiours of Italie, which haue vsed warfare, for their particular Arte, and albeit they haue not through their malignitie become Dukes of Milcin, so muche the more they deserue to be blamed: for that although they haue not gotten so muche as he, they haue all (if their liues were seene) sought to bying the like things to passe. Sforza father of Fraunces, constrained Quene Ione, to cast her self into the armes of the king of Aragon, hauing in a sodaine forsaken her: and in the midst of her enemies, lefte her disarmed, onely to satisfie his ambition, either in taxing her, or taking from her the kingdome. Braccio with the very same



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A Prouerbe  
of vvarre &  
peace.

same industrie, sought to possesse the kingdome of Pa-  
ples, and if he had not bene ouerthrowen and slaine at  
Aquila, hee had brought it to passe. Like disorders grow  
out of other, then of such men as hath bene, that vse the  
exercise of warfare, for their proper arte. Haue not you  
a Prouerbe, whiche foresheweth my reasons, which saith,  
that warre maketh Thieues, and peace hangeth them  
vp: For as muche as those, whiche knowe not howe  
to liue of other exercise, and in the same finding not any  
man to sustayne them, and hauing not so muche power,  
to knowe howe to reduce themselves together, to make  
an open rebellion, they are constrained of necessity to  
Robbe in the highe wayes, and Justice is enforced to  
extinguish them. Colimo. You haue made mee to es-  
teeme this arte of warfare almoste as nothing, and I  
haue supposed it the most excellentest, and moste hono-  
rablest that hath bene used: so that if you declare mee it  
not better, I cannot remayne satisfied: For that when  
it is the same, that you saye, I knowe not, wherof grow-  
eth the glozpe of Cesar, of Pompei, of Scipio, of Mar-  
cello, & of so manie Romane Capitaynes, whiche by  
fame are celebrated as Goddes. Fabritio. I haue not  
yet made an ende of disputing all the same, that I pur-  
posed to propound: whiche were two thinges, the one  
that a good manne coulde not vse this exercise for his  
Arte: the other, that a common weale or a kingdome  
well gouerned, did neuer permit, that their Subiectes  
or Citizens shoulde vse it for an Arte. About the firste,  
I haue spoken as much as hath comen into my minde  
there remaineth in mee to speake of the seconde, where  
I wyll come to aunswere this your lastte question,  
and I saye that Pompei and Cesar, and almost all those  
Capitaynes, whiche were at Rome, after the last Car-  
thagenens warre, gotte fame as valiaunt men, not as  
god, and those which liued before them, got glozpe as  
valiaunt and good men; the which grewe, so that these  
toke

to ke not the exercise of warre for their Arte: and those whiche I named firste, as their arte did vse it, And so long as the common weale lined vnspotted, neuer anye Noble Citezen woulde presume, by the meanes of suche exercise, to auayle therby in peace, breaking the lawes, spoyling the Prouinces, vsurping, and playing the Tyrant in the Countrey, and in euerye maner preuayling: nor anye of howe lowe degree so euer they were, woulde go aboute to violate the Religion, confederating them selues with priuate men, not to feare the Senate, or to followe any Tyrannicall insolence, for to be able to liue with the Arte of warre in all times.

But those whiche were Capitaynes, contented with triumphe, with desire did turne to their priuate life, and those which were members, woulde be more willing to lay away their weapons, then to take them, & euerye man tourned to his science, whereby they got their liuing: for there was neuer any, that woulde hope with pray, and with this Arte, to be able to finde themselves. Of this there maye be made concerning Citezens, most euident coniecture, by the ensample of Regolo Attillio, who being Capitayne of the Romane armies in Affrica, and hauing as it were overcome the Carthagenens, he required of the Senate, licence to returne home, to kepe his possessions, & tolde them, that they were made of his husbandmen. Whereby it is more cleare then the sunne, that if the same man had vsed the warre as his Arte, and by meanes therof, had purposed to haue made it profitable vnto him, hauing in prayse so many Prouinces, he woulde not haue asked licence, to returne to keepe his felde: for as muche as euery day he might otherwise haue gotten much more, then the value of all those possessions: but because these good men, & suche as vse not the warre for their art, wil not take of the same any thing then labour, perilles, and glozie, when they  
are

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are sufficiently glorious, they desire to returne home and to live of their owne science. Concernyng men of lowe degree, and common souldiours, to proue that they kepte very same order, it doeth appeare that euery one willingly absented them selues from such exercise, and when they serued not in the warre, they would haue desired to serue, and when they dyd serue, they would haue desired leaue not to haue serued: which is well knowne throught many insamples, and in especiall ye seeing howe among the first priuileges, which the Romaine people gaue to their Citizens was, y they should not be constrained against their willes, to serue in the warres. Therfore, Rome so long as it was well gouerned, which was untill the coming of Graccus, it had not anye souldiour that would take this exercise for an arte, and therefore it had fewe naughty, and those fewe were seuerely punished. When a Citie well gouerned, ought to desire, that this studie of warre, be vsed in time of peace for exercise, and in the time of warre, for necessity and for glorie: and to suffer only the common weale to vse it for an arte, as Rome dyd, and what soeuer Citizen, that hath in suche exercise other ende, is not good, and what so euer Citie is gouerned otherwise, is not well ordeyned. Cosimo. I remaine contented enough and satisfied of the same, which hether to you haue told, & this conclusion pleaseth me very well which you haue made, and as much as is looked for touching a common weale, I beleue that it is true, but concerning kings, I can not tell nowe, for that I woulde beleue that a kinge woulde haue about him, whome particularlye should take suche exercise for his arte. Fabritio. A kingdom well ordered ought most of all to auoide the like kinde of men, for onely they, are the destruction of their king, and altogether ministers of tyrannye, and alledge me not to the contrary any present kingdomes, for that I woulde denye you all those to be kingdomes well orde-  
red



red, because the kingdomes whiche haue god orders, giue not their absolute Empire vnto their king, sauing in the armies, for as muche as in this place onelye, a quicke deliberation is necessarye, and for this cause a principall power ought to be made. In the other affaires, he ought not to do any thing without counsell, and those are to be feared, whiche counsell him, least he haue some about him which in time of peace desireth to haue warre, because they are not able without the same to liue, but in this, I wilbe a little moze large: neither to seeke a kingdome altogether good, but like vnto those, which be nowe a dayes, where also of a king those ought to be feared, which take the warre for their art, for that the strength of armies without any doubt are the sote men: so that if a king take not order in suche wise, that his men in time of peace maye be content to retourne home, and to liue of their owne trades, it will follow of necessitie, that he ruinate: for that there is not founde moze perillous men, then those, which make the warre as their arte: because in suche case, a king is enforced either alwayes to make warre, or to paye them alwaies or else to be in perill, that they take not from him his kingdome. To make warre alwaies, it is not possible: to paye them alwaies it can not be: for that of necessitie, he runneth in peril to lose the state. The Romanes (as I haue saide) so long as they were wise & good, would neuer permit, that their Citizens should take this exercise for their arte, although they were able to nourish the therein alwaies, for y that alwaies they made warre: but to auoide the same hurte. whiche this continuall exercise might do them, seeing the time did not varie, they chaunged the men, and from time to time tooke such order with their Legions, that in xv. yerres alwaies, they renewed them: and so they had their men in the floure of their age, that is from xvliij. to xxxliij. yerres, in whiche time the legges, the handes, and the eyes aunswere the



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ene the other, nor they tarried not till their strength should decaye, and their naughtinesse increase, as it did after in the corrupted times. For as much as Octavian first, and after Tiberius, minding more their owne proper power, then the publicke profite, began to vnarme the Roman people, to be able easlye to commaunde them, and to keepe continuallye those same armies on the frontieres of the Empire: and because also they iudged those, not sufficient to keepe bydeled the people and Roman Senate, they ordeined an armie called Pretoriano, which lay harde by the walles of Rome, and was as a rocke on y<sup>e</sup> backe of the same Citie. And for asmuch as then they began fræly to permit, that suche men as were appointed in such exercises, should vse the seruice of warre for their arte, straighte waye the insolence of them grewe, that they became fearfull vnto the Senate, & hurtfull to the Emperour, whereby ensued such harme, that manye were slaine through their insolencie: for that they gaue, and tooke awaye the Empire, to whome they thought good. And some while it happened, that in one selfe time there were manye Emperours, created of diuers armies: of whiche thinges proceeded first the deuision of the Empire, and at last the ruine of the same. Therfore kinges ought, if they will liue safely to haue their Souldiours made of men, who when it is time to make warre, willingly for his loue will go to the same, and when the peace cometh after, more willingly will returne home. Which alwaies wilbe, when they shalbe men that knowe howe to liue of other arte then this: and so they ought to desire, peace being come, that their Prince do tourne to gouerne their people, the gentilmen to the tending of their possessions, and the common souldiours to their particular arte, and euerye one of these, to make warre to haue peace, and not to sake to trouble the peace, to haue warre. Cosim. True, ly this reasoning of yours, I thinke to bee well considered

sidered, notwithstanding being almost contrary to that, which till now I haue thought, my minde as yet doeth not rest purged of all doubt, for as much as I see manye Lordes and gentelmen, to finde them selues in time of peace, though the studies of warre, as your matches be, who haue prouision of their Princes, and of the comminaltie. I see also, almost all the gentelmen of armes remayne with their prouision. I see many souldiers lye in garison of Cities and fortresses, so that me thinkes, that there is place in time of peace, for every one

Fabritio. I do not beleeue that you beleeue this, that in time of peace every man maye haue place, because, put case that there coulde not be brought other reason, the small number, that all they make. whiche remayne in the places all edged of you, would aunswere you.

What propoztion haue the souldiours, whiche are requisite to be in the warre with those, which in the peace are occupied: for as much as the fortresses, and the Cities that be warded in time of peace, in the warre are warded much moze, vnto who are ioyned the souldiers whiche keepe in the fildes, which are a great number, all which in the peace be put away. And concerning the garde of states, which are a small number, Pope Iulij, and you haue shewed to euery man, how much are to be feared those, who will not learne to exercise anye other arte, then the warre, and you haue for their insolence, deprived them from your garde, and haue placed therein swifers, as men bozne and brought vp vnder lawes, and chosen of the comminaltie, according to the true election: so that saye no moze, that in peace is place for euery man. Concerning men at armes, they al remayning in peace with their wages, maketh this resolution to seeme moze difficult: notwithstanding who considereth well all, shall finde the aunswere easie, because this maner of keeping men of armes, is a corrupted maner and not good, the occasion is, for that

C.ij.

they

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they be men, who make thereof an Arte, and of them their should growe euery daye a thousande inconueni-  
ences in the states, where they should be, if they were  
accompanied of sufficient company: but being few, and  
not able by the selues to make an armie, they can not  
often do such grieuous hurtes, neuerthelesse they haue  
done oftentimes: as I haue saide of Fraunces, and of  
Sforza his father, and of Braccio of Perugia: so that this  
vse of keeping men of armes, I do not allowe, for it is a  
corrupt, maner, and it may make great incōueniences.  
Colimo. Would you liue without them? or keeping  
them, howe would you keepe them? Fabritio By waye  
of ordinaunce, not like to those of the king of Fraunce:  
for as much as they be perillous, and insolent like vnto  
ours, but I would keepe them like vnto those of the aun-  
cient Romanes, whome created the chivalrye of their  
owne subiectes, and in peace time, they sent them home  
vnto their houses, to liue of their owne trades, as moze  
largely befoze this reasoning ende, I shall dispute. So  
that if nowe this part of an armie, can liue in such ex-  
ercise, as well whē it is peace, it groweth of the corrupt  
order. Concerning the prouisiōs, which are reserued to  
me, & to other capitaines, I say vnto you, that this like-  
wise is an order most corrupted: for as much as a wise  
common weale, ought not to giue such stipends to any,  
but rather they ought to vse for Capitaines in þ warre,  
their Citizens, and in time of peace to will, that they  
returne to their occupatiōs. Likewise also, a wise king  
either ought not to giue to such, or giuing any, the occa-  
siō ought to be either for rewarde of some worthy deede,  
or else for the desire to keepe suche a kinde of man, as  
well in peace as in warre. And because you alledged  
me, I will make ensample vpon my selfe, & say that I  
neuer vsed the warre as an arte, for as much as my art,  
is to gouerne my subiectes, & to defende them, and to be  
able to defende them, to loue peace, & to knowe howe to  
make

make warre, and my king not so much to rewarde and esteeme me, for my knowledge in the warre, as for the knowledge that I haue to counsel him in peace. Then a king ought not to desire to haue about him, any that is not of this condition if hee bee wise, and prudentlye minde to gouerne: for that, that if he shall haue aboute him either to much louers of peace, or to much louers of warre, they shall make him to erre. I can not in this my first reasoning, and according to my purpose saye moze, and when this sufficeth you not, it is mete, you seeke of the that may satisfie you better. You may now very well vnderstande, howe difficulte it is to bring in the auncient maners in the present warres, & what preparatiōs are mete for a wise man to make, & what occasions ought to be looked for, to be able to execute it. But by and by, you shall knowe these thinges better, if this reasoning make you not weary, conferring what so euer partes of the auncient orders hath bene, to the maners now present. Cosimo. If we desired at the firste to here your reason of these thinges, fruelye the same which hetherto you haue spoken, hath doubled oure desire: wherefore we thanke you for that we haue hard, & the rest, we craue of you to here. Fab. Seeing that it is so your pleasure, I will begin to intreate of this matter from the beginning, to the intent it may be better vnderstande, being able by the same meane, moze largely to declare it. The ende of him that will make warre, is to be able to fight with euery enemy in the fildes, & to be able to ouercome an armie. To purpose to do this, it is conuenient to ordeyne an host. To ordeyne an host, there must be found men, armed, ordered, & as well in the small, as in the great orders exercised, to knowe howe to keepe araye, and to incampe, so that after bringing them vnto the enemy, either standing or marching, they may knowe how to behaue them selues valiantly. In this thing consisteth all the industrie of the warre

A king that hath aboute him any that are to muche louers of vvar, or to muche louers of peace shall cause him to erre,



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warre on the lande, which is the most necessarie, and the most honourablest, so; he that can wel order a fildes against the enemye, the other faultes y he should make in the affaires of warre, wil be bozne with: but he that lacketh this knowledge, although that in other particulars he be very good, he shall neuer bying a warre to honour: so; as much as a fildes that thou winnest, doth cansell all other thy euill actes: so likewise lasing it, all thinges well done of thee before, remaine vaine. Wherefore, being necessarie first to finde the men, it is requisite to come to the choise of them. They whiche vnto the warre haue giuen rule, will that the men be chosen out of temperate countries, to the intent they may haue hardinesse, and prudence, so; as much as the hot countrye, breeds prudence men & not hardy, the colde, hardy and not prudente. This rule is good to be geuen, to one that were Prince of all the worlde, because it is lawfull so; him to chuse men out of those places, which he shall thinke best. But minding to giue a rule, that euery one may vse, it is meete to declare, y euery commō weale, and euery kingdome, oughte to chuse their souldiours out of their owne countrye, whether it be hotte, colde, or temperate: so; that it is sene by olde ensamples, how that in euery countrye with exercise, there is made good souldiours: because where nature lacketh, the industrie supplieth, the which in this case is worth more, then nature, and taking them in other places, you shall not haue of the choise, so; choise is as muche to saye, as the best of a prouince, and to haue power to chuse those that will not, as well as those that will serue. Wherefore, you must take your choise in those places, that are subiecte vnto you, so; that you cannot take whome you liste, in the countries that are not yours, but you muste take such as will go with you.

Cosimo. Yet there may be of those, that will come, taken and leste, and therefore, they may be called chosen.

Oute of  
vhat coun-  
trie is best  
to chuse sol-  
diours to  
make a good  
election.

sen, Fabritio. You saye the trueth in a certayne maner, but consider the faultes, which such a chosen man hath in himselfe, for that also manye times it happeneth, that he is not a chosen man. For those that are not thy subiectes, and which willingly do serue, are not of the best, but rather of the worst of a Princes, for as muche as if any be sclanderous, idle, unruly, without Religion fugitiue from the rule of their fathers, blasphemous, Disce players, in euerye condition euill brought vp, bee those, which will serue, whose customes cannot be moze contrarie, to a true & good service: Albeit, when there be offered vnto you, so many of suche men, as come to aboue the number, that you haue appointed, you maye chuse them: but the matter beyng naught, the choise is not possible to be good: also, many times it chaunceth, that they be not so many, as will make vp the number, whereof you haue neede, so that being constrained to take them all, it cometh to passe, that they cannot the be called chosen men, but hired Souldiours. With this disorder the armies of Italie, are made nowe adaires, and in other places, excepte in Almaine, because there they do not hire any by commaundement of the Prince, but according to the will of them, that are disposed to serue. Then consider nowe, what maners of those aunciente armies, may be brought into an army of me, put together by like waies. Cosimo. What way ought to be vsed then? Fabritio. The same waie that I saide, to chuse them of their owne subiectes, and with the authoritie of the Prince. Cosimo. In the chosen, shal there be likewise brought in any auncient fashion? Fabritio. You know well enough that ye: when he that should commaunde them, were their Prince, or ordinarie lord, whether he were made chiefe, or as a Citezen, & so the same time Capitaine, being a common weale, other wise it is harde to make any thing good.

Cosimo. Why? Fabritio. I will tell you a none: For  
this

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Whether it  
be better to  
take me out  
of towne  
or out of the  
countrie to  
serue.

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to be cho-  
sen.

this time I will that this suffice you, that it can not bee wrought well by other waye. Cosimo. Having then to make this choise of men in their owne countries, whether iudge you that it be better to take them out of the Citie, or out of the Countrie? Fabritio. Those that haue written of such matters, do all agree, that it is best to chuse them out of the countrie being men accustomed to no ease, nourished in labours, used to stande in the sunne, to sie the shadowe, knowing howe to occupie the spade, to make a ditch, to carrie a burden, and to be without any deceit, & without malitiousnesse. But in this part of my opinion should be, y being two sorts of Souldiour, on fote, and on horsebacke, that those on fote, should be chosen out of the countrie, and those on horsebacke, out of the Cities, Cosi. Of what age would you chuse them? Fab. I would take them, when I had to make a newe armie, from xviij. to xl. yeares: when it were made already, and I had to restore them, of xviij. allwayes. Cosimo. I do not vnderstand well this distinction. Fabritio. I shall tell you: when I should ordeyne an hoste to make warre, where were no hoste already, it should be necessarie to chuse all those men, which were most fit and apt for the warre, so that they were of seruisable age, that I might be able to instruct them, as by mee shall be declared: but when I would make my choise of men in places, where a power were alreadye prepared for supplying of the same, I would take them of xviij. yerres: for asmuch as the other of more age, be already chosen and appointed. Cosimo. When would you prepare a power like to those which is in our countrie? Fabri. Yea truly, it is so that I would arme them, Capitayne them, exercise and order them in a maner, which I cannot tell, if you haue ordered the so. Cosimo. When do you prayse the keeping of order?

Fabritio. Wherefore would you that I should dispraise it? Cosimo. Because many wise men haue alwaies



waies blamed it.

Fabritio. You speake against all reason, to saye that a wise man blameth order, he maye bee well thought wise, and be nothing so.

Cosimo. The naughty proofe which it hath allwayes, maketh vs to haue such opinion thereof.

Fabritio. Take heede it be not your fault, and not the keeping of order, the which you shall knowe, befoze this reasoning be ended.

Cosimo. You shall do a thing most thankfull, yet I will say concerning the same, that they accuse it, to the entent you maye the better iustifie it. They saye thus, either it is vnprofitable, and we trusting on the same, shall make vs to leese our state, or it shall be vertuous, and by the same meane, he that gouerneth may easily depriue vs therof. They alledge the Romaynes, who by meane of their owne powres, lost their libertie. They alledge the Venicians, and the Frenche king, which Venicians, because they will not be constrained, to obeye one of their owne Citezens, vse the power of straungers: and the Frenche king hath disarmed his people, to bee able moze easely to commaunde them, but they whiche like not the ordinaunces, feare much moze the vnprofitablenesse, that they suppose may insue thereby, then any thing els: the one cause whiche they alledge is, because they are vnerperte: The other, so that they haue to serue par force: so as much as they say, that the aged bee not so disciplinable, nor apt to learne the seate of armes, and that by force, is done neuer any thing good.

Fabritio. All these reasons that you haue rehearsed, bee of men, whiche knoweth the thing full litle, as I shall playnly declare. And firste, concerning the vnprofitablenesse, I tell you, that there is no service vled in anye countrey moze profitable, then the service by the Subiectes of the same, nor the same service cannot be prepared, but in this maner: and so that this nee-

D.I.

beth



## The first Booke of

By what  
meanes fol-  
dours bee  
made bolde  
and expert.

beth not to be disputed of. I wil not lēse much time: be-  
cause all the ensamples of auncient histories, make for  
my purpose, and for that they alledge the lacke of expe-  
rience, and to vse constraint: I saye how it is true, that  
the lacke of experience, causeth lacke of courage, & con-  
straint, maketh euill contention: but courage, and ex-  
perience they are made to get, with the maner of arming  
them, exercising, and ordering them, as in proceeding of  
this reasoning, you shall heare. But concerning con-  
straint, you ought to vnderstande, that the men, which  
are conducted to warfare, by commaundement of their  
Prince, they oughte to come, neither altogether forced,  
nor altogether willingly, for as much as to much wil-  
lingnesse, would make the inconueniencies, where I  
tolde afoze, that he should not be a chosen man, & those  
would be fewe that would go: and so to muche con-  
straint, will bring forth naughtye effectes. Wherefoze,  
a meane ought to be taken, where is not all constraint,  
nor all willingnesse: but being drawen of a respect,  
that they haue towarde their Prince, where they feare  
more the displeasure of the same, then the present paine  
and alwaies it shall happen to be a constrainte, in ma-  
ner mingled with willingnesse, that there cannot grow  
such euill contentation, that it make euill effectes. Yet  
I saye not for all this, that it cannot be overcome, for  
that full many times, were overcome the Romane ar-  
mies, and the armie of Anibal was overcome, so that  
it is scene, that an armie can not be ordayned so sure,  
that it cannot be overthrowen. Wherefoze, these your  
wise men, ought not to measure this vnprofitablenesse,  
for hauing losse once, but to beleue, that like as they  
lose, so they may winne, and remedie the occasion of  
the losse: and when they shall seeke this, they shall finde,  
that it hath not bene through fault of the waye, but of  
the order, which had not his perfection, and as I haue  
sayde, they ought to prouide, not with blaming the or-  
der

ber, but with redressing it, the which howe it ought to be done, you shall vnderstande, from point to point. Concerning the doubt, lest such ordinaunces, take not from the thy state, by meane of one, which is made head therof, I answer, that the armure on the backes of Citizens, or subiectes, giuen by the disposition of order and lawe, ord neuer harme, but rather alwaies it doth good, and maintayneth the Citie, muche longer in suretye through helpe of this armure, then without. Rome continued free. CCC. yeres, and was armed. Sparta viij. C. Many other Cites haue bene disarmed, and haue remained free, lesse then xl. For as much as cities haue neede of defence, and when they haue no defence of their owne, they hire straungers, and the straungers defence, shall hurte muche sooner the common weale, then their owne: because they be much easier to be corrupted, and a Citizen that becommeth mightie, may muche sooner vsurpe; & more easely bring his purpose to passe, where the people be disarmed, that he seeketh to oppresse, besides this, a Citie ought to feare a great deale more, two enemies then one. The same Citie that vseth straungers power, feareth at one instant the straunger, which it hireth, and the Citizen: and whether this feare ought to be, remember the same, whiche I rehearsed a litle agoe of Frances Sforza. That Citie, which vseth her own proper power, feareth no man, other then only her own Citizen. But for all the reasons that may be sayd, this shall serue me, that neuer any ordeyned any common weale, or kingdome, I would not thinke, that they themselves, I inhabite the same, should with their swordes defende it.

And if the Venicians had bene so wise in this, as in all their other orders. they should haue made a newe Monarchie in the worlde, whome so much the more deserve blame, hauing bene armed of their first giuer of lawes: for hauing no dominion on the lande, they were

D.ij.

armed

A Citie that vseth the seruice of straungers feareth at one instant the straungers, which it hireth & the Citizens of the same.

## *The first Booke of*

armed on the sea, where they made their warre vertuouslye, and with weapons in their handes, increased their ccountie. But when they were diuened, to make warre on the lande, to defende Vicenza, where they ought to haue sent one of their Citezens, to haue fought on the land, they hired for their Capitayn, the Marques of Mantua: this was the same foolish acte, whiche cut of their legges, from climbing into heauen, and from enlarging their dominion: and if they did it, because they beleued, that as they knew, how to make warre on the sea, so they mistrusted them selues, to make it on the lande, it was a mistruste not wise: for as much as moze easely, a Capitayn of the sea, which is vsed to fight with the windes, with the water, & with men, shall become a Capitayne of the lande, where he shall fight with men onely, then a Capitayne of the lande, to become a Capitayne of the sea. The Romanes knowing howe to fight on the lande, and on the sea, comming to warre, with the Carthaginens, which were mightie on the sea, hired not Grekes, or Spaniardes, accustomed to the Sea, but they committed the same care, to their Citezens, which they set on lande, and they ouercame. If they did it, for that one of their Citezens should not become a tiraunt, it was a feare smally considered: for that besides the same reasons, which to this purpose, a litle afoze I haue rehearsed, if a Citezen with the powers on the sea, was neuer made a tiraunt in a Citie standing in the sea, so much the lesse he shoulde haue been able to accomplishe this with the powers of the lande: whereby they ought to see that the weapons in the handes of their Citezens coulde not make tirauntes: but the naughtie orders of the gouernement, which maketh tirannie in a Citie, and they hauyng good gouernment, they neede not to feare their owne weapons: they toke therfoze an vnwise way, the which hath been occasion to take from them much glozie, and much felicitie. Concerning the  
error



error which the King of Fraunce committeth, not keeping instructed his people in the warre, the which those your wise men alledge for ensample, there is no man, (his particuler passions layde aside) that doth not iudge this fault to be in the same kingdome, and this negligence onely to make him weake. But I haue made to great a digression. and peradventure am come out of my purpose, albeit, I haue done it to aunswere you, and to shew you that in no countrey, there can be made sure foundation, for defence in other powers, but of their owne subiectes: and their owne power can not be prepared otherwise, then by way of an ordinance, nor by other way to induce the fashion of an armie in any place, nor by other meane to ordaine an instruction of warfare. If you haue read the orders, which those first kinges made in Rome, and inespacially Seruio Tullio, you shall finde that the orders of the Classi is no other, then an ordinance, to be able at a sodaine, to bring together an armie, for defence of y<sup>e</sup> Citie. But let vs returne to our choise; I saye againe, that hauing to renewe an olde order, I woulde take them of xviij. hauing to make a newe army, I woulde take them of all ages, betwene xviij. and xl. to be able to warre straight ways.

Cosimo. Would you make any difference, of what science you would chuse them?

Fabritio. The authours, which haue written of the arte of warre, make difference, for that they will not, that there bee taken Foulers, Fishers, Cookes, Bandes, nor none that vse anye science of voluptuousnesse. But they will, that there bee taken Plowmen, Herbers, Smithes, Carpenters, Butchers, Hunters, and suche like: but I woulde make litle difference, through coniecture of the conscience, concerning the goodnesse of the man, notwithstanding, in as muche as to be able with moze profite to vse them, I woulde make difference, and for this cause, the countrie men, which are

Of vvhich  
science sol-  
diers ought  
to be chosen

bles



## The first Booke of

used to till the ground, are moze profitable then any other. Next to who be Smithes, Carpenters, Ferrars, Masons, wherof it is profitable to haue enough: for that their occupacions, serue well in many thinges: being a thing very good to haue a souldiour, of whom maye bee had double seruice.

Cosimo. Wherby do they knowe those, that be, or are not sufficient to serue.

Fabritio. I will speake of the maner of chusing a new ordinaunce, to make an armie after, for that, part of this matter, both come also to be reasoned of, in the election, which should be made for replenishing, or restoring of an olde ordinaunce. I say therfore, that the goodnesse of one, which thou must chuse for a souldiour, is knowne either by experience, through meane of some of his woorthy doinges, or by coniecture. The proofe of vertue, cannot be founde in men whiche are chosen of newe, and which neuer also haue bene chosen, and of these are founde either fewe or none, in the ordinaunce that of newe is ordeyned. It is necessarye therfore, lacking this experience, to runne to the coniecture, which is taken by the yeres, by the occupation, and by the personage: of those two first, hath bene reasoned, there remaineth to speake of the thirde. And therfore, I saye howe some haue willed, that the souldiour bee great amongst whome was Pirrus. Some other haue chosen them onely, by the lustinesse of the bodye, as Caesar dyd: which lustinesse of body and minde, is conicured by the composition of the members, and of the grace of the countenance: therfore, these that write saye, that they would haue the eyes liuely and cherefull, the necke full of sinowes, the bresta large, the armes full of muscullcs, the fingers long, litle bealy, the flankes rounde, the legges and sette dyke: whiche partes are wont alwayes to make a man nimble and strong, whiche are two thinges, that in a souldiour are soughte aboue all other,

Howe to  
chose a souldiour.

other. Regarde ought to be had about all thinges, to his  
customes, and that in him be honesty, and shame: other-  
wise, there shall be chosen an instrument of mischief,  
and a beginning of corruption: so, that let no man be-  
lieue that in the dishonest education, and filthy minde,  
there maye take anye vertue, whiche is in anye parte  
laudable. And I thinke it not superfluous, but rather I  
beloeue it to be necessarie, to the entent you maye the  
better vnderstande, the importance of this chosen, to  
tell you the maner, that the Romane Consuls, in the  
beginning of their rule, obserued in the choosing of their  
Romane legions: in the whiche choise of men, because  
the same legions were mingled with olde souldiours &  
newe, considering the continuall warre they kept, they  
might in their choise procede, with the experience of the  
old, and with the coniecture of the newe: and this ought  
to be noted, that these men be chosen, either to serue  
incontinently, or to exercise them incontinentlye, and  
after to serue when neede shoulde requyre. But my in-  
tention is to shewe you, howe an armie may be prepa-  
red in the countrie, where there is warlike discipline:  
in which countrie, chosen men cannot be had, to vse the  
straight waye, but there, where the custome is to leaue  
armies, and by meane of the Prince, they maye them  
well be had, as the Romanes obserued, and as is ob-  
serued at this daye among the Swisers: because in these  
chosen, though there be many newe men, there be also  
so manye of the other olde souldiours, accustomed to  
serue in the warlike orders, where the newe mingled  
together with the olde, make a bodie vnited and good,  
notwithstanding, that the Emperours after, beginning  
the stationes of ordinarie souldiours, had appointed  
ouer the newe souldiours, which were called Tironi,  
a maister to exercise them, as appeareth in the life of  
Masimo the Emperour. The whiche thing, while  
Rome was free, not onelye in the armies, but in the  
citie

## *The first Booke of*

Cittie was ordeyned : and the exercises of warre , being accustomed in the same , wher the young men did exercise , there grew , y being chosen after to go into warre , they were so bled in the sained exercise of warfare , that they could easely worke in the true : but those Emperours hauing after put downe these exercises , they were constrained to vse the wayes , that I haue shewed you. Therefore , comming to the maner of the chosen Romane , I say that after the Romane Consulles ( to whome was appointed the charge of the warre ) had taken the rule , minding to ordeyne their armies , so that it was the custome , that either of the shoulde haue two Legions of Romane men , whiche was the strength of their armies , they created .xxliij. Tribunes of warre , and they appointed sixe for euery Legion , whome by the same office , which those do now a daies , that we call Constables : they made after to come together , all the Romane men apte to beare weapons , and they put the Tribunes of euery Legion , separate the one from the other. Afterwarde , by lot they dyde the Tribes , of which they had first to make the chosen , and of the same Tribe they chose foure of the best , of which was chosen one of the Tribunes , of the first Legion , and of the other three was chosen , one of the Tribunes of the second legion , of the other two there was chosen one of the tribunes of the thirde , & the same last sel to the fourth Legion. After these iiij. they chose other foure , of which , first one was chosen of the tribunes of the seconde legion , the second of those of the thirde , the thirde of those of the fourth , the fourth remayned to the first. After , they chose other foure , the first chose the thirde , the second the fourth , the thirde the fifth , the fourth remayned to the seconde : and thus they varied successiuelpe , this maner of choosing , so that the election came to be equall , and the Legions were gathered together : and as aforesaid , this choise mighte be made to vse straight waye



waye, for that they made them of men, of whom a good part were experienced in the very warfare in deede, & all in the fained exercised, and they mighte make this choise by coniecture, and by experience. But where a power muste bee ordeyned of newe, and for this to chuse them out of hande, this chosen cannot be made, saving by coniecture, which is taken by considering their ages and their likeliness.

Cosimo. I beleue all to be true, as much as of you hath bene spoken: but before that you proceede to other reasoning, I would aske of you one thing, whiche you haue made mee to remember: saying that the choosing, that is to be made where men were not used to warre, ought to be made by coniecture: for as muche as I haue hearde some men, in manye places dispraise our ordinance, and in especially concerning the number, for that many say, that there ought to be taken lesse number, wherof is gotten this profite, y they shall be better and better chosen, and men shall not be so muche diseased, so that there may be given the some rewarde, wherby they may be more contented, and better be commaunded, wherof I would vnderstande in this parte your opinion, and whether you loue better the great number, then the litle, & what way you would take to chuse them in the one, and in the other number.

Fabritio. Without doubt it is better, and more necessarye, the great number, then the litle: but to speake more plainly, where there cannot be ordeyned a great number of men, there can not be ordeyned a perfect ordinance: and I will easily confute all the reasons of them propounded. I saye therefore first, that the lesse nōber where is many people, as is for ensample Tuscane, maketh not that you haue better, nor that the chosen be more excellent, for that minding in choosing the men, to iudge them by experience, there shall be founde in the same countrey most fewe, whome expe-



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rience shoulde make prouable, both for that fewe hath bene in warre, as also for that of these, most fewe haue made triall, whereby they might deserue to bee chosen before the other: so that he which ought in like places to chuse, it is more he leaue a parte the experience, and take them by coniecture. Then being brought likewise into such necessitie, I would vnderstande, if there come before me twentye young men of good stature, with what rule I ought to take, or to leaue any: where without doubt, I beleue that enery man will confesse, howe it is lesse errour to take them al, to arme them and exercise them, being not able to knowe, whiche of them is best, and to reserue to make after more certayn chosen, when in practising them with exercise, there shall bee knowne those of moste spirite, and of moste life: whiche considered, the chusing in this case a fewe, to haue them better, is altogether naught.

Concerning diseasing lesse the countrie, and men, I say that the ordinaunce, either euill or litle that it bee, causeth not any disease, for that this order doth not take men from any of their businesse it bindeth the not, that they can not go to do any of their affaires: for that it bindeth the only in the ydle dayes, to assemble together, to exercise them, the which thing doth no hurt, neither to the countrie, nor to the men, but rather to young men, it shall bring delight: for that where bilye on the holye daie, they stande idle in tippling houses, they will go for pleasure to those exercises, for that the handling of weapons, as it is a goodly spectacle, so vnto yong men it is pleasaunt. Concerning to be able to pay the lesse number, and for this to keepe them more obedient, & more contented, I answer, how there cannot be made an ordinaunce of so few, which may be in maner continuallye paid, where the same paymēt of theirs may satisfie the. As for ensample, if there were ordeyned a power of v. thousande men, for to paye them after such sorte, that  
it

it might be thought sufficient, to contente them, it shall be conuenient to geue them at leaſt, tenne thouſande crownes the moneth: firſt, this number of men are not able to make an armie, this paye is intollerable to a ſtate, and of the other ſide, it is not ſufficiente to keepe men contented, and bound to be able to ſerue at all times: ſo that in doing this, there ſhall bee ſpent muche, and a ſmall power kept, which ſhall not be ſufficient to defende the, or to do any enterpriſe of thine. If thou ſhouldeſt giue them moze, or ſhouldeſt take moze, ſo much moze impoſſibilitie it ſhoulde bee, for the to paye them: if thou ſhouldeſt giue the leſſe, or ſhould take leſſe, ſo much y leſſe contentatiō ſhould be in the, or ſo much y leſſe profite they ſhall bring the. Wherefoze, thoſe that reaſon of making an ordinaunce, and whileſt they tarry at home to paye them, the reaſon of a thing either impoſſible, or vnprofitable, but it is neceſſare to paye them when they are taken vp to be lead to the warre: albeit, though ſuch order ſhould ſomewhat diſeaſe thoſe, in time of peace, that are appointed in the ſame, whiche I ſee not howe, there is for recompence all thoſe benefites, which a power brings, that is ordeyned in a countrey: for that without the ſame, there is nothing ſure. I conclude, that he that will haue the litle number, to be able to paye them, or for anye of the other cauſes alledged of you, doeth not vnderſtande, for that alſo it maketh for my opinion, that euery number ſhall diminuiſhe in thy handes, through infinite impedimentes whiche men haue: ſo that the litle number ſhall tourne to nothing: againe hauing the ordinaunce great, thou maielt at thy pleaſure uſe fewe of many, beſides this, it muſt ſerue the in dede, and in reputation, and alwaies the great number ſhal giue the moſt reputation. Moreover, making the ordinaunce to keepe men exerciſed, if thou appointe a fewe number of men in manye countries, the bandes of men bee ſo farre a ſonder, the one from

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the other, that thou canst not without their most grievous losse, gather them together to exercise them, and without this exercise, the ordinance is unprofitable, as hereafter shalbe declared.

Colimo. It sufficeth vpon this my demaunde, that whiche you haue saide, but I desire now, that you declare mee an other doubt. They saye, that suche a multitude of armed men, will make confusion, discensio, and disorder in the countrey where they are.

Fabritio. This is an other vaine opinion, the cause wherof, I shall tell you: such as are ordeyned to serue in the warres, maye cause disorder in two maners, either betwene them selues, or against other, which thinges most easlye maye be withstode, where the order of it selfe, shoulde not withstande it: for that concerning the discorde among them selues, this order taketh it away, & doth not nourish it, for that in ordering them, you giue them armour and Captaynes. If the countrey where you ordeyne the, bee so vnapt for the warre, that there are not armours among the men of the same, and that they be so vnited, that they haue no heads, this order maketh the much fearser against the straüger, but it maketh the not any thing the moze disvnited, for that men well ordered, feare the law being armed, as well as vnarmed, nor they can neuer alter, if the Capitayns, which you giue them, cause not the alteration, and the waye to make this, shall be tolde now: but if the countrey where you ordeyn them, be warlike and disvnited, this order onely shalbe occasion to vnite them, because this order giueth them armours profitable for the warre, and heades, extinguishers of discention: where their owne armours be unprofitable for the warres, & their heades nourishers of discorde. For that so soone as any in the same countrey is offended, he resoꝛteth by and by to his Capitayn to make complaynte, who for to maintayn his reputation, comfoꝛteth him to reuengement,  
not



not to peace. To the contrarie doth the publike heade, so that by this meanes, the occasion of disorde is taken away, and the occasion of vniõ is prepared. & the prouinces vnited and effeminated, get vtilitie, and maintayne vniõ: the disvnted and discencious, do agree, & the same their fearnesse, which is wont disordinatelie to worke, is touned into publike vtilitie. To minde to haue them, to do no hurte against other, it ought to be considered, that they cannot do this, except by meane of the heades, which gouerne the. To will that the heades make no disorde, it is necessary to haue care, that they get not ouer them to much authoritie. And you must consider that this authoritie, is gotten either by nature, or by accident: & as to nature, it behooueth to prouide, that he whiche is borne in one place, be not appointed to the men billed in the same, but be made heade of those places, where he hath not any naturall aquaintaunce: and as to the accident, the thing ought to be ordeyned in such manner, that euery yere the heades maye be chaunged from gouernement to gouernement: for as muche as the continuall authoritie ouer one sorte of men, breedeth among them so much vniõ, that it may tourne easely to the preiudice of the Prince: whiche permutacions howe profitable they bee to those who haue vsed them, and hurtful to them that haue not obserued them, it is well knowen by the kingdome of the Assirians, and by the Empire of the Romaynes, where is seene, that the same kingdome indured a thousand yeres without tumulte, and without any Ciuill warre: whiche proceeded not of other, then of the permutacions, whiche from place to place euery yere the same Capitaynes made, vnto whome were appointed the charge of the Armies. For for anye other occasion in the Romane Empire, after the blood of Cesar was extinguished, there grewe so manye ciuill warres, betwene the Capitaynes of the hostes, and so many conspiracies of the

Howe to prouide against suche inconueniences as soldiers make cause.

The occasiõ of ciuill vvarr among the Romanes.

for sayde



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foresaid capitaynes against the Emperours, but onelye  
foz keeping continually still those capitaynes alwayes  
in one gouernment. And if in some of those first Em-  
perours, and of those after, whome helde the Empire  
with reputation, as Adriane, Marcus, Scuerus, and such  
like, there had bene so much foresight, that they had  
brought this custome of chaunging the Capitaynes in  
the same Empire, without doubt it shoulde haue made  
them moze quiete, and moze durable: For that the  
Capitaines shoulde haue had lesse occasion to make  
tumultes, the Emperour lesse cause to feare, and the  
Senate in the laces of the successions, shoulde haue had  
in the elction of the Emperour, moze authoritie, and  
by consequence shoulde haue bene better: but the nangh-  
tye custome, either foz ignorance, or thzough the litle  
diligence of men, neither foz wicked, nor god ensam-  
ples, can be taken away.

Cosimo. I cannot tell, if with my questioning, I haue  
as it were lead you out of order, because from the chu-  
sing of men, we be entered into an other matter, and if  
I had not bene a litle befoze excused, I shoulde thinke to  
deserue some reprehension.

Fabritio. Let not this disquiete you, for that all this  
reasoning was necessarye, minding to reason of the or-  
dinaunce, the which being blamed of manye, it was re-  
quisite to excuse it, willing to haue this first parte of chu-  
sing men to be allowed. But now befoze I discende to  
the other partes, I will reason of the choise of men on  
horsebacke. Of the antiquitie, these were made of the  
most richeste, hauing regarde both to the yeres, and to  
the qualitie of the man: and they chose CCC. fo: a Le-  
gion, so that the Romane horse, in euery Consulles ar-  
mie, passed not the number of vi. C. Cosimo. Woulde  
you make an ordinaunce of horse, to exercise them at  
home, and to vse their seruice when neede requires?

Fabritio. It is most necessary, and it cannot be done  
otherwise

The nomb.  
of horsen  
that the Ro-  
manes chose  
for a Legion  
and for a  
Consulles  
armie.

*the Art of Warre. Fol.xx.*

otherwise, minding to haue þ power, that it be the owne proper, and not to purpose to take of those, which make thereof an arte.

Cosimo. Howe would you chuse them?

Fabritio. I would imitate the Romanes, I would take of the richest, I would giue them headres o: chiefe Capitaynes, in the same maner, as nowe adayes to o: ther is giuen, and I would arme them & exercise them.

The choo-  
sing and or-  
dering of  
horsemen,  
that is to be  
observed at  
this present

Cosimo. To these should it be well to giue some pro-  
uision:

Fabritio. Yea marie, but so much onely as is necessa-  
rye to keepe the ho:se, for as muche as b:inging to thy  
subiectes expences, they might iustly complayne of thee,  
therefoze it shoulde be necessarie, to paye them their  
charges of their ho:se.

Cosimo. What number woulde you make: and how  
woulde you arme them?

Fabritio. You passe into an other matter. I will  
tell you in conuenient place, whiche shalbe  
when I haue tolde you, howe sorte men  
oughte to be armed, and howe  
a power of men is pre-  
pared, for a day  
of battaile.

(.r.)



# The second booke of the arte of warre,

of Nicholas Machiavel, Citezen and Secretarie  
of Florence, vnto Laurence  
Philip Strozze.

(12.)



Beleeue that it is necessarye,  
men being founde, to arme  
them, and minding to doo  
this, I suppose that it is a  
needfull thing to examine,  
what armour the antiqui-  
tie vsed, and of the same to  
chose the best. The Romanes  
rendred their foote men in  
heauie and light armed :

Howe the  
Romanes  
armed their  
souldiers &  
vwhat vvea-  
pons they v-  
sed

Those that were light armed, they called by the name  
of Velites: Under this name were vnderstande all those  
that theye we with Slinges, shot with Crossebowes,  
cast Dartes, and they vsed the most parte of them for  
their defence, to weare on their heade a *Spurion*, with a  
Targaet on their arme: they fought out of the orders,  
and farre of from the heauie armed, which did weare a  
head pice, that came downe to their shoulders, a *Corse-  
let*, which with the tases came downe to the knees, and  
they had the legges and armes, couered with greaves,  
and bambaces, with a targaet on the left arme, a yarde  
and a halfe long, & three quarters of a yarde brode, whi-  
che had a hope of Iron vpon it, to be able to sustaine a  
blowe, and an other vnder, to the intente, that it being  
driven to the earth, it should not breake: for to offende,  
they had girt on their left flanke a sword, the length  
of a yarde and a naile, on their righte side, a Dagger:  
they had a darte in euery one of their handes, the which  
they called *Pilo*, and in the beginning of the fight, they  
theye those at the enemye. This was the ordering,  
and

And impoꝛtaunce of the armours of the Romanes , by  
the which they possessed all þe world. And although some  
of the se auncient wꝛiters gaue them , besides the foze-  
sayde weapons, a staffe in their hande like vnto a Par-  
tasen, I cannot tell howe a heauy staffe, may of him that  
holdeth a Targaet bee occupied:foꝝ that to handle it with  
bothe hands, the Targaet should bee an impediment, and  
to occupye the same with one hande, there can be done  
no good therewith, by reason of the weightynesse therof:  
besides this, to faight in the strong, & in the oꝝders with  
such long kinde of weapon, it is vnprofitable , except in  
the first front, where they haue space enough , to thrust  
out all the staffe, which in the oꝝders within , cannot be  
done, foꝝ that the nature of the battaile ( as in the order  
of the same, I shall tell you) is continually to thꝛong to-  
gether, which although it be an inconuenience, yet in so  
doing they feare lesse , then to stande wide , where the  
perill is most euident , so that all the weapons , which  
passe in length a yarde & a halfe, in the thꝛong, be vnpro-  
fitable:foꝝ that, if a man haue the Partasen, and will oc-  
cuppe it with both handes , put case that the Targaet  
let him not, he can not hurte with the same an enemye,  
whom is vpon him, if he take it with one hande , to the  
intent to occupie also the Targaet , being not able to  
take it, but in the midst , there remayneth so much of  
the staffe behinde, ȳ those which are behinde hym , shall  
let him to welde it. And whether it were true, either that  
the Romanes had not this Partasen , oꝝ that hauing it,  
did litle good withall. reade all the battalles, in the histo-  
rye therof, celebrated of Titus Liuius, and you shall see  
in the same, most seldome times made mencio of Par-  
tasens, but rather alwaies he saith, that the Partes be-  
ing thꝛowen, they layed their hands on their swerdes.  
Wherefoꝝe I will leane this staffe, and obserue, concer-  
ning the Romanes, the sworde foꝝ to hurte, and foꝝ de-  
fence the Targaet, with the other armours afoꝝesaide.



## The second Booke of

Howe the  
Greekes did  
arme them-  
selues, and  
what wea-  
pons they vs-  
ed againste  
their ene-  
mies.

The Greekes dyd not arme them selues so heauily, for their defence, as the Romanes dyd: but for to offend the enemies, they grounde more on their stauces, then on their swordes, and in especiall ye the Fallangye of Macedonia, which vsed stauces, that they called Sarisse, seven yardes and a halfe long, with the which they opened the ranks of their enemies, and they kept the orders in their Fallangy And although some wyters saie, that they had also the Targaet, I can not tell (by the reasons aforesayde) howe the Sarisse and they coulde stande together. Besides this, in the battaile that Paulus Emilius made, with Perse king of Macedonia, I do not remember, that there is made any mention of Targaettes, but only of the Sarisse, and of the difficultie that the Romane armie had, to ouercome them: so that I coniecture, that a Macedonicall Fallange, was no other wise, then is now a dayes a battaile of Suizzers, the whiche in their pikes haue all their force, & all their power.

A braue & a  
terrible thing  
to the ene-  
mies.

Howe the  
Romanes  
armed their  
horsemen in  
olde time.

The Romanes did garnish (besides the armours) the footemen with feathers: the whiche thinges makes the sight of an armie to the friends goodly, to the enemies terrible The armour of the horsemen, in the same first Romane antiquitie, was a rounde Targaet, and they had their head armed, and the rest vnarmed: They had a sworde and a staffe, with an Iron head onely be- fore, long and small: whereby it happened, that they were not able to stave the Targaet, and the staffe in the incountring broke, and they thzough being vnarmed, were subiecte to hurtcs: after, in procelle of time, they armed them as the footemen, albeit they vsed the Targaetic muche shorter, square, and the staffe more stiffe, and with two heades, to the entente, that breas- king one of the heades, they mighte preuaile with the other. With these armours as well on foote, as on horsebacke, the Romanes conquered all the worlde, and it is to be beloued, by the fruit thereof, whiche is  
sene

kiene, that they were the beste appointed armics, that  
 euer were: and Titus Linius in his hystory, doeth testifie  
 verie often, where comming to comparision with the  
 enemies armics, he saith: But the Romanes, by ver-  
 tue, by the kinde of their armours, and practise in the  
 seruice of warre, were superiours: and therfore I haue  
 moze particularly reasoned of the armours of conque-  
 rours, then of the conquered. But now we doe thinke  
 good, to reason onely of the manner of arming men at  
 this presente. Foote men haue for their defence, a breast  
 plate, and for to offende, a lance, sixe yardes and thre  
 quarters long, which is called a pike, with a sworde on  
 their side, rather rounde at the point, then sharpe. This  
 is the ordinarie arming of foote men now a dayes, for  
 that fewe there be, which haue their legges armed, and  
 their armes, the heade none, and those fewe, beare in  
 steede of a Pike, a Halberde, the staffe whereof as you  
 know, is two yardes and a quarter long, and it hath the  
 Iron made like an are. Betwene them, they haue War-  
 rebutters, the which with the violence of the fire, do the  
 same office, which in olde time the slingers did, and the  
 Crossebowe shoters. This manner of arming, was found  
 out by the Dutchemen, in speciall ye of Suizzers, who  
 being poore, and desirous to liue free, they were, and be-  
 constrained to fight, with the ambition of the Princes  
 of Almanie, who being riche, were able to keepe horse,  
 the which the same people could not do for pouertie.  
 Wherby it grewe, that being on foote, minding to de-  
 fende them selues from the enemies, that were on hor-  
 sebacke, it behoueth them to seeke of the aunciente or-  
 ders, and to finde weapons, whiche from the furie of  
 horses, should defende them: This necessitie hath made  
 either to be maintayned, or to be founde of them the  
 aunciente orders, without whiche, as euery pru-  
 dente man affirmeth, the foote men is altogether un-  
 profitable. Therefore, they tooke for their weapon the

The maner  
 of arming  
 men now  
 a daies.

The inuen-  
 tion of Pikes.

F. y. Pike,

## *The second Booke of*

**Pike**, a moste profitable weapon, not only to withstande horses, but to ouercome them: and the Dutchemen haue by vertue of these weapons, and of these orders, taken such boldnesse, that xv. or xx. thousande of them, will assault the greatest number of horse that maye be: and of this, there hath bene experience enough within this xlv. yeres. And the insamples of their vertue hath bene so mightie, grounded vpon these weapons, and these orders, that sence King Charles passed into Italie, euery nation hath imitated them: so that the Spanish armies, are become into most great reputation.

**Cosimo.** Whiche maner of arming, do you praise moste, either these Dutchemens, or the auncient Romanes?

**V**Whether the Romanes maner in arming of men, be better then the arming of men, that is vsed nowye a daies.

**Fabritio.** The Romane without doubt, and I will tell you the commoditie, and the discommoditie of the one, and the other. The Dutche footemen, are able to withstande, and ouercome the horses: they be moste speedie to marche, and to be set in araye, being not laden with armours: of the other part, they be subiecte to all blowes, both farre of, and at hande: because they be vnarmed. they be vnprofitable vnto the battaile on the lande, and to euery fight, where is strong resistance. But the Romanes withstode, and ouercame the horses, as well as the Dutchemen, they were safe from blowes at hande, and farre of, being couered with armours: they were also better able to charge, and better able to sustaine charges, hauing Targaettes: they might moze aptly in the pceace fight with the sword, then these with the Pike, and though the Dutchemen haue likewise swordes, yet being without Targaets, they become in suche case vnprofitable: The Romanes might safelye assault towne, hauing their bodies cleane couered with armour, and being better able to couer themselves with their Targaettes. So that they had no other incommoditie, then the waightynesse of



of their armours, and the pain to carry them, the which things they overcame, with accustoming the body to diseases, and with hardening it, to be able to indure labour. And you knowe, how that in things accustomed, men suffer no griefe. And you haue to vnderstand this, that the footemen may be constrained, to fight with footemen, and with horses, and alwaies those be vnprofitable, whiche cannot either sustain the horses, or being able to sustayne them, haue notwithstanding neede to feare the footemen, which be better armed, and better ordeyned then they. Nowe if you consider the Dutchemen, and the Romanes, you shall finde in the Dutchemen aduantage (as we haue said) to overcome the horses, but great disadvantage, when they fight with men, ordeyned as they themselues are, and armed as the Romanes were, so that there shall be this aduantage moze of the one, then of the other, that the Romanes could overcome the men, and the horses, the Dutchemen onely the horses.

Colimo. I woulde desire, that you woulde come to some moze particular ensample, whereby we maye better vnderstande.

Fabritio. I saye thus, that you shall finde in manye places of our histories, the Romane footemen to haue overcome innumerable horses, and you shall neuer finde, that they haue bene overcome of men on foot, for defaulte that they haue had in their armour, or thorough the bantage that the enemy hath had in the armours: for that if the maner of their arming, shoulde haue had defaulte, it had bene necessarye, that there should followe, the one of these two things, either that findinge suche, as shoulde arme them better then they, they shoulde not haue gone still forwardes, with their conquestes, or that they shoulde haue taken the straungers maners, and shoulde haue lefte their owne, and for that it followed not in the one thing, nor in the other there groweth that there maye be easely coniectured, that



## The second Booke of

that the maner of their arming, was better then y<sup>e</sup> same of any other. It is not yet thus happened to Dutchemen, for that naughtie p<sup>ro</sup>we, hath bene seene made by them, when soeuer they haue chaunced to fight with men on fote prepared, & as obstinate as they, the which is growen of the vauntage, which the same haue incou<sup>er</sup>sed in the enemies armours. Philip Vicecounte of Milaine, being assaulted of. xviij. thousande Suizzers, sente against them the Counte Carminuola, which then was his Capitayne. He with sixe thousande horse, and a few footemen, went to mee<sup>t</sup>e with them, and incountering them, he was repulsed with his most great losse: where by Carminuola as a prudent man, knewe straight waie the puissaunce of the enemies weapons, and how much against the horses they p<sup>re</sup>uailed, and the debilitie of the horses, against those on fote so appointed: and gathering his men together againe, he wente to finde the Suizzers, and so soone as he was nere them, he made his men of armes, to alight from their horse, and in the same maner fighting with them, he slue them all, except th<sup>re</sup>e thousande: the whiche seeing them selues to consume, without hauing remedie, casting their weapons to the grounde, y<sup>e</sup>elded.

An ensample  
vvhich  
proueth  
that horse-  
men vwith  
staues, can-  
not p<sup>re</sup>uaile  
against foot-  
emen vwith  
Pikes, and  
vvhich great  
aduantage  
the armed  
haue, a-  
gainst the  
vnarmed.

The victo-  
rie of Car-  
minuola a-  
gainst the  
Dutchmen.

Cosimo. Whereof commeth so much disadvantage?

Fabritio. I haue a little afoze tolde you, but seeing that you haue not vnderstode it, I will rehearse it againe. The Dutchemen (as a little befoze I sayde vnto you) as it were vnarmed, to defende them selues, haue to offende, the Pike and the sworde: they come with these weapons, and with their orders to finde the enemies, whome if they be well armed, to defende them selues, as were the men of armes of Carminuola, whiche made them alighte on fote, they come with the sworde, and in their orders to finde them, and haue no other difficultie, then to come nere to the Suizzers, so that they maye retche them with the sworde, for that

so soone as they haue gotten vnto them, they fight safely: for as muche as the Dutche man, can not strike the enemy with the Pike, who is vpon him, for the length of the staffe, wherefoze it is conueniente for him, to put the hande to the sworde, the whiche to him is vnprofitable, he being vnarmed, and hauing against him an enemy, that is all armed. Therby he that considereth the vantage, and the disadvantage of the one, and of the other, shall see, howe the vnarmed, shall haue no maner of remedie, and the ouercomming of the first fight, and to passe the first pointes of the Pikes, is not muche difficult, he that fighteth being well armed: for that the battailes go (as you shall better vnderstande, when I haue shewed you, howe they are set together) and in counterling the one the other, of necessitie they thrust together, after suche sort, that they take the one thother by the bosome and though by the Pikes some bee slaine or ouerthrowen, those that remaine on their feete, be so many, that they suffice to obtayne the victorie. Hereof it grewe, that Carminuola ouercame them, with so great slaughter of the Suizzers, and with little losse of his. Cosimo. Consider that those of Carminuola, were men of armes, who although they were on fote, they were couered all with Steele, and therefore they were able to make the p:ofe they did: so that me thinkes, that a power ought to be armed as they, minding to make the verie same p:ofe.

The battails  
vwhen thei  
are a fighting,  
doo throng together.

Fabritio. If you should remember, howe I tolde you the Romanes were armed, you woulde not thinke so: for as muche as a man, that hath the head conered with Iron, the breast defended of a Cozselet, and of a Targaet, the armes and the legges armed, is muche moze apte to defende him selfe the frō Pike, & to enter among them, then a man of armes on fote. I will giue you a litle of a late ensample. There were come out of Cicilie, into the Kingdome of Naples, a power  
of

## The second Booke of

of Spaniardes, so to go finde Consaluo, who was besse-  
ged in Barlet, of the Frenchmen: there made against the  
Mounſieur de Vhigni, with his men of armes, & with  
about foure thousand Dutchemē on fote: The Dutche-  
men incountered with their Pikes lowe, and they ope-  
ned the power of Spaniardes: but those being holpe, by  
meane of their bucklers and of the agiletie of their bo-  
dies, mingled together with the Dutchmen, so that they  
might retche them with the sword, wherby happened  
the death, almost of all them, and the victoꝛye to the Spa-  
niardes. Euery man knoweth, howe many Dutchemen  
were slaine in the battaile of Rauenna, the which happe-  
ned by the very same occasion: so y<sup>e</sup> the Spanish soul-  
diours, got them within a swordes length of the Dutche  
souldiours, and they had destroyed them all, if of the  
Frenche hoꝛſemen, the Dutchemen on fote, had not been  
succoured: notwithstanding, the Spaniardes close toge-  
ther, brought themselves into a safe place. I conclude  
therefoꝛe, that a good power ought not onely to be able,  
to withſtande the hoꝛſes, but also not to haue feare of  
men on fote, the which (as I haue many times sayde)  
pꝛocēdeth of the armours, and of the order.

How to ar-  
me men, and  
ywhat vvea-  
pons to ap-  
point them,  
after the  
Romaine  
maner, and  
Dutche fa-  
shion.

Cosimo. Tell therfoꝛe, howe you woulde arme the:  
Fabritio. I woulde take of the Romaine armours,  
and of the Dutchemens weapons, and I woulde that  
the one halfe, shoulde be appointed like the Romanes  
and the other halfe like the Dutchemen: so that if  
in fīre thousande fote men (as I shall tell you a litle  
hercafter) I shoulde haue thꝛē thousande men with  
Targaettes, after the Romaine maner, and two thou-  
sande Pikes, and a thousande Parkebutters, after the  
Dutche fashion, they shoulde suffice: so that I woulde  
place the Pikes, either in the front of the battaile, oꝛ  
where I shoulde feare most the hoꝛſes, and those with  
the Targaettes and swordes, shall serue me to make  
a backe to the Pikes, and to winne the battaile, as I  
shall



shall shewe you: so that I beleue, that a power thus ordayned, should overcome at this daye, any other power Cosimo. This which hath bene saide, sufficeth concerning footemen, but concerning horsemen, wee desire to vnderstand, which you thinke more stronger armed, either ours, or the antiquitie.

Fabritio. I beleue that in these daies, hauing respect to the Saddelles bolstered, and to the stirrappes not vlsed of the antiquitie, they stande more strongly on horsebacke, then in the olde time: I thinke also they arme the more sure: so that at this daye, a bande of men of armes, payling very muche, cometh to be with more difficultie withstode, then were the horsemen of old time: notwithstanding for all this, I iudge, that there ought not to be made more accompt of horses, then in olde time was made, for that (as afoze is sayde) manye times in our dayes, they haue with the footemen receyued shame and shall receyue alwayes, where they incounter, with a power of footemen armed, and ordered, as aboue hath bene declared. Tigrane king of Armenia, had against the armie of the Romanes, wherof was Capitayne Lucullo, 61. thousande horsemen, amongst the whiche, were many armed, like vnto our men of armes, which they called Catafratti, & of the other parte, the Romanes were about sixe thousande, with xxv. thousand footemen: so that Tigrane seeing the armie of the enemies, saide: these be horses enough for an inbassage: notwithstanding, incountering together, he was ouerthrowen: and he that writeth of the same fighte, displayeth those Catafratti, declaring them to be vnprofitable: for that he sayeth, because they had their faces couered, they had muche a doe to set, and to offende the enemye, and they falling, being laden with armour, coulde not rise vp again, nor welde them selues in any maner to preuaile. I say therefore, that those people or kingdomes, whiche shall esteeme more the power of horses, then the po-

The victorie  
of Lucullo,  
against Ti-  
grane king  
of Armenia.



## The second Booke of

For what  
put, the  
not men be  
not requi-  
re

wer of footemen be alwaies weake, and subiecte to all ruine, as by Italic hath been sene in our time, the whiche hath bene taken, ruinated, and ouer run with straungers: though not other fault, then for hauing taken litle care, of the seruice on foote, and being brought the soulbours therof, all on horsebacke. Yet there ought to be had horses, but for seconde, and not for firste foundation of an armie: for that to make a discouery, to ouer run, and to destroy the enemies countrie, and to keepe troubled and disquieted, the armie of the same, and in their armours alwayes, to let them of their vituals, they are necessary, and most profitable: but concerning for the daye of battaile, and for the fighte in the fielde, whiche is the importaunce of the warre, and the ende, for which the armies are ordeined, they are moze matter to follow the enemy being discomfited then to do any other thing which in the same is to be done, and they be in comparison, to the footemen much inferiour.

Cosimo, There is happened vnto me two doubtles, the one, where I knowe, that the Parthians dyd not vse in the warre, other then horses, and yet they deuided the worlde with the Romanes: the other is, that I woulde that you should shewe, howe the horsemen can be withstoode of footemen, and wherof groweth the strength of these, and the debilitie of those?

Fabritio Either I haue tolde you, or I minded to tell you, howe that my reasoning of the affaires of warre, ought not to passe the boundes of Europe: when thus it is, I am not bounde vnto you, to make accompte of the same, which is vsed in Asia, yet I muste saye vnto you thus, that the warring of the Parthians, was altogether contrarie, to the same of the Romanes: for as muche as the Parthians, warred all on horsebacke, and in the fight, they proceeded confusedlye, and scattered, and it was a maner of fighte vnsable, and full of vncertaintie. The Romanes were (it maye be sayde) almost

almost al on fote, and they fought close together & sure,  
and they ouercame diuersly, the one the other according  
to the largenesse, or straightnesse of & situation: for that  
in this the Romaines were superiours in the same: the  
Parthians, who might make great p<sup>ro</sup>se with the same  
maner of warryng, considering the region, which they  
had to defende, the which was most large: for as much  
as it hath the sea coaste distant a thousande miles, the  
rivers thone from thother, two or thre daies iourney,  
the townes in like maner and the inhabitants few: so  
that a Romaine armie beaue and slowe, by meanes  
of their armoures, and their orders, could not ouer run  
it, without their greuous hurt (those that defended it,  
being on horsebacke most expedit) so that they were to  
day in one place, & to morowe distant fiftie miles. Here  
of it grewe, that the Parthians might p<sup>re</sup>uaile with  
their chivalrie onelye, both to the ruine of the armie of  
Crassus, & to the perill of the same, of Marcus Antonius:  
but I (as I haue told you) do not intend in this my rea-  
sonyng, to speake of the warfare out of Europe, ther-  
fore I will stande vpon the same, whiche in times past  
the Romaines ordained, and the Grækes, and as the  
Duchemen do now adaies. But let vs see to the other  
question of yours, where you desire to vnderstande,  
what order, or what naturall vertue makes, that the  
fotemen ouercome the horsemen. And I say vnto you  
first that the horses cannot go, as the fotemen in eue-  
ry place: They are slower then the fotemen to obey,  
when it is requisite to alter the order: for as much as  
if it be needefull, either goyng forward, to turne back-  
warde, or tournyng backwarde, to go forward, or to  
moue themselves standing still, or goyng to stand still  
without doubt, the horsemen cannot do it so redylie  
as the fotemen: the horsemen cannot, being of some  
violence, diso<sup>rd</sup>ained, returne in their orders, but with  
difficultie, although the same violence ceasse the which

The reason  
why fotemen  
are able  
to ouercome  
horsemen.

## *The second Booke of*

the footemen do most easly and quickly. Besides this, it happeneth many times, that a hardye man shall be upon a vile horse, and a coward upon a good, whereby it followeth, that this euil matching of stomackes, makes disorder. For no man doeth maruaile, that a bande of footemen, susteyneth all violence of horses: for that a horse is a beast, that hath sence, and knoweth the perils, and with an ill will, will enter in them: and if you consider, what force maketh them go forward, & what holdeth them backward, you shall see without doubt, the same be greater, whiche keepeth them backe, then that which maketh them go forward: For that the spurre maketh them go forward, and of the other side, either the sword, or the Pike, keepeth them backe: so that it hath bene seene by the olde, and by the late experience, a bande of footemen to be most safe, yea, innincible for horses. And if you shoulde argue to this, that the heate, with whiche they come, maketh them moze furious to incounter, who that woulde withstande them, and lesse to regarde the Pike, then the spurre: I say, that if the horse so disposed, begin to see, that he must runne upon the pointe of the Pike, either of him selfe, hee will refraine the course so that so soone as he shall feele him selfe pricked, he will stande still at ones, or being come to them, he will tourne on the right, or on the left hande. Wherof if you will make experience, prone to ruine a horse against a wall: you shall finde fewe, with what so euer furie he come withall, will strike against it. Caesar hauing in Fraunce, to fight with the Suizzers, alighted, and made euery man alight on foote, and to auoide from the arayes, the horses, as a thing moze mete to flie, then to fight. But notwithstanding these naturall impedimentes, which horses haue, the same Capitayne, whiche leadeth the footemen, oughte to chuse wayes, which haue for horse the moste impedimentes that maye be, and seldome times it happeneth, but that

How footemen maye saue themselves from horsemen.



that a man maye saue himselfe , by the qualitie of the  
countrie: for that if thou marche on the hilles, the situa-  
cion doth saue thee from the same surpe , whereof you  
doubt, that they go withall in the playne, fewe playnes  
bee, which through the tillage, or by meanes of the wod-  
des, do not assure thee : for that euerye hillocke , euerye  
bancke, although it be but small, taketh away the same  
heate, and euery culture where bee vines , and other  
trees, letteth the horses: and if thou come to battaile, the  
very same letteth happeneth, that chaunceth in marching:  
for as much as euery litle impeditente , that the horse  
hath, abateth his surpe. One thing notwithstanding, I  
will not forget to tell you , howe the Romanes este-  
med so much their orders , and trusted so much to their  
weapons , that if they shoulde haue had, to chuse either  
so rough a place to saue themselues from horses, where  
they shoulde not haue been able, to raunge their orders,  
or a place where they shoulde haue neede, to feare more  
of horses, but bene able to desende their battaile , al-  
wayes they toke this, and leste that : but because it is  
time, to passe to the armye, hauing armed these Sould-  
iours , according to the auncient and newe vse , let vs  
see what exercises the Romanes caused them make, be-  
fore the men were brought to the battaile. Although they  
be well chosen, and better armed, they ought with most  
great studie be exercised, for that without this exercise,  
there was neuer any Souldiour good: these exercises  
ought to be deuided into three partes, the one, for to har-  
den the bodye, and to make it apte to take paynes , and  
to be more swifter & more readier , the other, to teache  
them, howe to handle their weapons , the thirde, for to  
learne them to keepe the orders in the armie, as well in  
marching, as in fighting , and in the incamping : The  
whiche be three principall actes , that an armie doeth :  
for as much , as if an armie marche, incampe, and fighte  
with order, and expertlye, the Capitayne loseth not his  
honour,

The exercise  
of souldiers  
ought to be  
deuided in-  
to 3. partes.



## The second Booke of

What exercises the  
auncient com-  
mon weales  
vsed to ex-  
cise their  
youth in, &  
what com-  
moditie in-  
sued there-  
by.

Howe the  
antiquitie,  
lerned their  
young soul-  
diours, to  
handle their  
weapens.

honour, although the battaile shoulde haue no good ende.  
Wherefore, all the auncient common weales, prouided  
these exercises in maner, by custome, and by lawe, that  
there shoulde not be leste behinde any part therof. They  
exercised then their youth, for to make them swifte, in  
running, to make them readye, in leaping, for to make  
them strong, in throwing the barre, or in wrestling: and  
these three qualities, be as it were necessarie in soul-  
diours. For that swiftnesse, maketh them apte to pos-  
sesse places, before the enemye, and to come to them un-  
looked for, and at vnwarcs to pursue them, when they  
are discomfited: the readinesse, maketh them apt to a-  
uoid a blowe, to leape ouer a ditch, to winne a banke:  
strength maketh them the better able to beare their ar-  
mours, to incounter the enemye, to withstande a vio-  
lence. And aboue all, to make the bodie the more apt to  
take paines, they vsed to beare great burthens, the  
which custome is necessarie: for that in difficulte expe-  
ditions, it is requisite many times, that the soul-  
diour beside his armours, beare victualles for manye dayes,  
and if he were not accustomed to this labour, he coulde  
not do it: and without this, there can neither be auoided  
a perill, nor a victorie gotten with same. Concerning to  
learne how to handle the weapons, they exercised them,  
in this maner: they would haue y<sup>e</sup> young men, to put on  
armour, which shoulde waie twice as much, as their field  
armour, and in steele of a sworde, they gaue them a  
cudgell leaded, which in comparison of a verie sworde  
in deede, was most heauie: they made for euery one of  
them, a poste to be set vp in the ground, whiche shoulde  
be in the height two yardes and a quarter, and in such  
maner, and so strong, that the blowes shoulde not stir  
nor hurle it downe, against the which poste, the young  
man with a Targaet, and with the cudgell, as against  
an enemye did exercise, and somewhiles he strooke, as  
though he woulde hurte the heade, or the face, some-  
whiles

while he retired backe, an other while he made soe-  
warde: and they had in this exercise, this aduertisement,  
to make them apte to couer themselves, and to hurt the  
enemie: and hauing the counterfeit armours most bea-  
uie, their ordinarie armours seemed after vnto them  
more lightcr. The Romanes, woulde that their Soul-  
diours shoulde hurte with the pike, and not with the  
cut, as well because the pike is more mortall, & hath  
lesse defence, as also to y intent, that he that shoulde hurt,  
might lye the lesse open, & be more apte to redouble it,  
then with cuttes. Do not maruaile that these auncient  
mē, shoulde thinke on these small things, for that where  
the incounter of men is reasoned of, you shall per-  
ceyue, y euery litle vauntage, is of great impoꝛtaunce:  
and I remember you the same, whiche the writers of  
this declare, rather then I to teache you. The antiqui-  
tie esteemed nothing more happie, in a common weale,  
then to be in the same many men exercised in armes:  
because not the shining of precious stones and of golde  
maketh that the enemies submit them selues vnto the,  
but onely the feare of the weapons: afterwarde, the er-  
rours which are made in other things, may sometimes  
be corrected, but those which are done in the warre, the  
payne straight waye comming on, cannot be amended.  
Besides that, the knowledge to fight, maketh men more  
bolde, because no man feareth to do that thing, whiche  
he thinketh to haue learned to do. The antiquitie would  
therefoze, that their Citezens shoulde exercise them  
selues, in all matriall seates, and they made them to  
thꝛowe against the same poste, dartes muche heauier  
then the ordinarie: the which exercise, besides the ma-  
king men experte in thꝛowing, maketh also the arme  
more nimble, and much stronger. They taught them  
also to shote in the long bowe, to whoꝛle with the sling,  
and to all these things, they appointed maisters, in such  
manner, that after when they were chosen for to

What the  
antiquitie  
esteemed  
most happie  
in a commo  
weale.

Monster  
Maisters, for  
the exerci-  
sing of yong  
men vnex-  
perte.

## The second Booke of

go to the warre, they were now with minde and disposition, souldiours. For there remayned them to learne other, then to go in the orders, and to maintayne them selues in those, either marching, or fighting: The which most easely they learned, mingling them selues with those, which had long time serued, whereby they knew howe to stande in the orders.

Cosimo. What exercises woulde you cause them to make at this present?

Fabritio. A good manye of those, whiche haue bene declared, as running, and wrestling, making them to leape, making them to labour in armours, muche heavier then the ordinarie, making them shote with Crosse bowes, and long bowes, wherunto I woulde ioyne the barkabus, a newe instrument (as you knowe) very necessary, and to these exercises I would vse all the youth of my state, but with greater industrie, & more sollicitatnesse y<sup>e</sup> same part, which I should haue already appointed to serue, and allwayes in the idle dayes, they shoulde be exercised. I would also that they shoulde learne to swimme, the which is a thing very profitable: for that there be not alwaies, byldges ouer riuers, boats be not alwaies readye: so that thy armie not knowing howe to swimme, remayneth depriued of manye commodities: and many occasions to worke well, is taken awaye. The Romanes for none other cause had ordeyned, that the young men shoulde exercise them selues in Campus Martius, then onelye, for that hauing Tiber at hande, they mighte, being wearied with the exercise on lande, refrethe them selues in the water, and partlie in swimming, to exercise themselves. I would make also, as y<sup>e</sup> antiquitie, those which shoulde serue on horsebacke to exercise, the which is most necessary. for that besides to know how to ride, they must knowe howe on horsebacke, they may prouaile of the. And for this they had ordeyned horses of wood, vpon the which they practised, to leape

The exercises that souldiers ought to make in these daies.

The exercise of swimming.

Tiber, is a river running through Rome, the vva-ter vvhich of vvhich neuer corrupt.

The exercise of vaulting, and com-  
moditie therof.



leape by armed, and vnarmed, without any helpe, & on euery hande: the which made, that at ones, and at a beck of a Capitayne, the horsemen were on fote, and likewise at a token, they mounted on horsebacke. And such exercises, both on fote and on horsebacke, as they were then easy to be done, so now they should not be difficult to the same common weale, or to the same prince which would cause them to be put in practise of their young men. As by experience is seene, in certayne Cities of the West country, where is kepte a liue like maners with this order. They diuide all their inhabitants into diuers partes: and euery parte they name of the kinde of those weapons, that they vse in the warre. And so; that they vse Pikes, Halberdes, Bowes, and Harkebuses, they call them Pike men, Halberders, Harkebutters, & Archers: Therfore, it is mete so; all the inhabitants to declare, in what orders they will be appointed in. And so; that all men, either so; age, or so; other impedimentes, be not fit so; the warre, euery order maketh a choise of men, & they call them *h* swozen, whom in idle daies, be bounde to exercise them selues in those weapons, wherof they be named: & euery man hath his place appointed him of the criminaltie, where such exercise ought to be made: & those which be of the same order, but not of the swozen, are contributarics with their money, to the same expenses, which in suche exercises be necessarie: therfore the same *h* they do, we maye do. But our small prudence doth not suffer vs, to take any good waye. Of these exercises there grew, that the antiquitie had good souldiours, and that now those of the West, be better men then ours: so; as muche as the antiquitie exercised them, either at home (as those common weales do) or in the armies, as those Emperours did, so; the occasions afoze saide: but we, at home will not exercise them, in Campe we cannot, because they are not our subiects, & so; that we are not able to binde

An order  
that is taken  
in certayne  
countries,  
concerning  
exercises of  
warre.



## *The second Booke of*

them to other exercises then they themselves list to do: the which occasion hath made, that first the armies be neglected, & after the orders, & that the kingdomes, and the common weales, in especially Italians, live in such debilitie. But let vs tourne to our order, and following this matter of exercises, I saye, howe it suffiseth not to make good armies, for hauing hardened the men, made them strong, swift, and handsome, where it is needfull also, that they learne to stand in the orders, to obey to signes, to soundes, and to the voice of the capitayne: to knowe, standing, to retire them selues, going for wardes, both fighting, & marching to maintayne those: because without this knowledge, with all serious diligence obserued, and practised, there was neuer armie good: and without doubt, the fierce and disordered men, be much more weaker, then the fearfull that are ordered, for that the order driueth awaye from men feare, the disorder abateth fiercenesse. And to the intent you maye the better perceue that, whiche here following shalbe declared, you haue to vnderstande, howe every nation, in the ordering of their men to the wayre, haue made in their host, or in their armie, a principall member, the which though they haue varied with the name, they haue litle varied with the number of the men: for that they all haue made it, betwixen fixe & viij M. men. This number of men was called of the Romanes, a Legion, of Grekes, a Fallange: of Frenchemen, Caterua: this very same in our time of the Suizzers, whom only of the aunient warfare, keepe some shadowe, is called in their tongue that, which in ours significth the maine battaile. True it is, that euerye one of them, hath after deuised it, according to their purposes. Wherefore mee thinkes best, that we grounde our talke, vpon this name most knowne, and after, according to the aunient, & to the orders now a daies, the best that is possible to ordeyne it: and because the Romanes deuised

What  
knowledge  
a souldiour  
ought to  
haue.

ded their Legion, which was made betwene five & sixe thousand men, in ten Cohortes, I will that we ordeine our maine battaile, into tenne battailes, and that we make it of sixe thousand men en sorte, and we will geue to euery battaile CCCC. me, of which shal be. CCCC. armed with heaue armour, and .L. with light armour: the heaue armed, shal be. CCC. Targettes with sweardes, and shalbe called Target men: and .C. with Pikes, which shalbe called ordinarie Pikes: the lighte armed shalbe .L. men armed with Varkabuses, Crosse bowes, and Partisans, and small Targaettes, & these by an auncient name, were called ordinarie Veliti: all the ten battrailes therfore, comes to haue thre thousande Targaet men, a thousande ordinarie Pikes. CCCC. ordinarie Veliti, all which make the number of fower thousand and five hundred men. And we saide, that we would make the maine battaile of sixe thousande: therfore there must be added an other thousande, five hundred men, of the which I will appoint a thousand with Pikes, whom I will call extraordinarie Pikes, & five hundred light armed, whom I will call extraordinary Veliti: and thus my men should come (as a litle before I haue saide) to be made halfe of Targaetes, and halfe of Pikes and other weapons. I would appointe to euery battaile, or bande of men, a Conestable, fower Centurions, and fourtie Peticapitaines, and moze ouer a heade to the ordinarie Veliti, with five peticapitaines: I would geue to the thousande extraordinarie Pikes, thre Conestables, ten Centurions, and a hundred peticapitaines: to the extraordinarie Veliti, two Conestables, v. Centurions, and .l. peticapitaines: I would then appoint a generall head, ouer all the maine battaile: I would that euery Conestable should haue an Ansigne, and a Drum. Thus there should be made a maine battaile of ten battailes of thre thousande Targaetmen, of a thousande ordinarie Pikes,

A Cohort is a bande of men.

Of what number and of what kind of armours & weapons, a maine battaile ought to be, and the distributing and appointing of the same.

Veliti are light armed men.

The capitaines that are appointed to euery bande of me.

## The second Booke of

of a thousande extraoꝝdinarie, of five hundred ordinary  
Eliti, of five hundred extraoꝝdinarie, so there shoulde  
come to be sixe thousande men, amongest the whiche  
there shoulde be **xx**. Peticapitaynes, and moꝝcouer  
**xv**. Constables, with **xv**. Drummes, and **xv**. Ansignes,  
**lv**. Centurions, **x**. heades of the ordinarie Eliti, and a  
Capitayn ouer all the maine battayle, with his Ansigne  
and Drumme: and I haue of purpose repeated this or-  
der the oftener, to the intent, that after when I shall  
shewe you, the maners of ordering the battailes, and the  
armies, you should not be confounded: I saye therefore  
how that, that king, or that common weale, which in-  
tendeth to ordeyne their subiectes to armes, oughte to  
appointe them with these armours and weapons, and  
with these partes, & to make in their countrie so many  
mayne battailes, as it were able: and when they shoulde  
haue ordeyned them, according to the foresaide distribu-  
tion, minding to exercise them in the orders, it shoulde  
suffice to exercise euery battaile by it selfe: and  
although the number of the men, of euery one of them:  
cannot by it selfe, make the fashion of a iuste armie, not-  
withstanding, euery man maye learne to do the same,  
which particularly appertayneth vnto him: for that in  
the armies, two orders is obserued, the one, the same  
that the men ought to do in euery battaile, and the other  
that, whiche the battaile oughte to do after, when it is  
with the other in armie. And those men, which do well  
the first, most easly may obserue the second: But with-  
out knowing the same, they can neuer come to the  
knowledge of the second. Then (as I haue sayde) euery  
one of these battailes, maye by them selues, learne to  
keepe the orders of the arrayes, in euery qualitie of mo-  
uing, and of place, & after learne to put them selues to-  
gethers, to vnderstande the sounds, by meanes wherof  
in the fight they are commaunded, to learne to knowe  
by that, as the Gallies by the whistell, what oughte to  
be

Two orders  
observed in  
an armie.



be done, either to stande still, or to tourne forward, or to tourne backward, or which way to tourne the weapons and the face: so that knowing how to kepe wel the aray after such sorte, that neither place nor moving maye disorder them, vnderstanding well the commaundementes of their heades, by meanes of the sounde, and knowing quickly how to returne into their place, these battailes may after easily (as I haue said) being brought many together, learne to do that, which all the body together, with the other battailes in a iust army is bound to do. And because such vniuersall practise, is also not to be esteemed a litle, ones or twise a yere, when there is peace, all the main battaile may be brought together, to geue it the fashion of an whole armie, some daies exercising them, as though they should fight a fielde, setting the fronte, and the sides with their succours in their places. And because a capitaine ordeineth his host to the fielde, either for compte of the enemye he seeth, or for that, of which without seing he doubteth, he ought to exercise his armie in the one maner, and in the other, and to instruct them in suche sorte, that they maye knowe howe to march, & to fight when neede should require, shewing to his souldiours, howe they should gouerne them selues, when they should happen to be assaulted of this or of that side: and where he ought to instruct them howe to fight against the enemye, whom they should see, he must shewe them also, howe the fight is begun, & where they ought to retire: being ouerthrowen, who hath to succede in their places, to what signes, to what soundes, to what voices they ought to obeie, and to practise them in such wise in the battaile, and with fained assaults, that they may desire the better thyng in dede. For that an armie is not made courageous, because in the same be hardie men, but by reason the orders thereof be well appointed: For as muche as if I be one of the first fighters, & do knowe,  
being

How a capitaine must instruct his souldiers how they ought to gouerne them selues in the battaile.



## The second Booke of

being oneremie, where I may retire, and who hath to succede in my place, I shall alwayes fight with boldnesse, seeing my succor at hande. If I shall be one of the seconde fighters, the firste being dyuen backe, and ouerthrowen, I shall not be afraide, for y I shall haue presupposed that I may bee, and I shall haue desire to be the same, which may giue the victory to my maister, and not to bee any of the other. These exercises be most necessary, where an armie is made of newe, and where the olde armie is, they be also necessary: for that it is also scene, howe the Romanes knewe from their infancie, the order of their armies, notwithstanding, those Captaynes befoze they should come to the enemy, continually did exercise them in those. And Iosephus in his historie sayeth, that the continuall exercises of the Roman armies, made that all the same multitude, which followe the campe for gaine, was in the day of battaile profitable: because they all knewe, howe to stande in the orders, and to fight keeping the same: but in the armies of newe men, whether thou haue put them together, to fight straight waie, or that thou make a power to fight, when neede requires, without these exercises, as wel of the battailes senerally by themselves as of all the armie, is made nothing: wherefoze the orders being necessary, it is conuenient with double industrie and labour, to shewe them vnto such as knoweith them not, and so: to teache it, manye excellent Captaynes haue traualled, without any respect.

Cosimo. He thinkes that this reasoning, hath somewhat transpored you: for as muche, as hauing not yet declared the wayes, with the which the battailes be exercised, you haue reasoned of the whole armie, and of the daye of battaile.

Fabritio. You say truely, but surely the occasion hath bene the affection, which I beare to these orders, and the griefe that I feele, seeing they be not put in vze: not with

With standing, doubt not but that I will tourne to the purpose: as I haue sayde, the chiefe importance that is in the exercise of the battailes, is to knowe howe to keepe well the arrayes: and because I tolde you that one of these battailes, ought to be made of foure hundred men beaue armed, I will stae my selfe vpon this number. They ought then to be brought into lxxx. rankes, & fise to a ranke: afterwarde going fast, or softly, to knit them together, and to lose them: the whiche howe it is done, may be shewed better with deedes, then with wordes. Which needeth not greatly to be taught, for that euerye mā, who is practised in service of warre, knoweth how this order proceedeth, which is good for no other, then to vse the souldiers to keepe the raze: but let vs come to put together one of these battailes, I say, that there is giuen them thre fashions principally, the firste, and the most profitable is, to make all massiue, and to giue it the fashion of two squares, the seconde is, to make it square with the front hoined, the thirde is, to make it with a boide space in the middelt: the maner to put men together in the first fashion, maye be of two sortes, the one is double the rankes, that is, to make the seconde ranke enter into the first, the iij. into the thirde, the fise into the fiste, and so forth, so that where there was, lxxx. rankes, fise to a ranke, they maye become. xl. rankes & f. to a ranke. Afterwarde cause the to double ones more in the same maner, setting y one ranke into an other, & so there shall remayn twettie rankes, twentie men to a ranke: this maketh two squares about, for as much as albeit that there be as many men the one waye, as in the other, notwithstandinge forwarde the head, they lye together, that the one side toucheth the other: but by the other waye, they be distant the one from the other, at least a yerde and a halfe, after suche sorte, that the square is muche longer, from the backe to the fronte, then from the one side to the other: and because we haue

The chiefe importance in the exercising of bandes of men

Three principal fashions for thordering of men into battaile raie.

The maners howe to bring a band of men into battaile raie after asquare fashion.

at

## The second Booke of

at this present, to sprake often of the partes afoze, of behinde, and of the sides of these battailes, & of all the armie together, knowe you, that when I saye either head or fronte, I meane the parte afoze, when I shall saye backe, the part behinde, when I shall saye flankes, the partes on the sides. The fiftie ordinarie beliti of the battaile, must not mingle with the other rankes, but so sone as the battaile is fashioned, they shalbe set a long by the flankes therof. The other waye to set together the battaile is this, and because it is better then the firste, I will set it befoze your eyes inst, how it ought to be ordeyned. I beleue that you remember of what number of men, of what heads it is made, and of what armours they are armed: then the fashion, that this battaile ought to haue, is (as I haue sayde) of twentie rankes, twentie men to a ranke, fve rankes of Pikes in the front, and fiftene rankes of Targaettes on the backe, fwe Centurions standing in the front, fwe behinde on the backe, who shall execute the office of those, which the antiquity called Tergibour. The Constable with the Ansigne, and with the Drumme, shall stande in the same space, that is betwene the fve rankes of the Pikes, and the fiftene of the Targaettes. Of the Peticapitaynes, there shall stande one vpon euery side of the ranckes, so that euery one, may haue on his side his men, those Peticapitaynes, which shalbe on the lefte hande, to haue their men on the right hande: those Peticapitaynes, which shall be on the right hand, to haue their men on the lefte hand: The fiftie Meliti, must stande a long the flankes, and on the backe of the battaile. To minde now, that this battaile maye be set together in this fashion, the men going ordinarye, it is conuenient to order them thus. Make the men to be broughte into fwe rankes, fve to a ranke, as a litle afoze we haue sayde, leaning the Meliti either at the heade, or at the taile, so that they stande out of this order: and it oughte to be ordeyned

The better  
vvaie for the  
ordring of a  
band of me  
in battaile  
raie, after the  
first facion.



ordained, that every Centurion have behinde his backe  
twentie rankes, and to be nexte behinde every Centu-  
rion, sixe rankes of Pikes, and the rest Targaettes.  
The Constable shall stande with the Drum, and the  
ansigne, in the same space, which is between the Pikes,  
and the Targaettes of the seconde Centurion, and to  
occupie the places of thre targact men. Of the Peticap-  
taynes, twentie shall stande on the sides of the rankes,  
of the first Centurion, on the left hande, and twentie  
shall stande on the sides of the rankes, of the last Cen-  
turion on the righte hande. And you must vnderstande,  
that the Peticapayne, whiche hath to leade the Pikes,  
ought to haue a Pike, & those that leade the Targaettes,  
ought to haue like weapons. When the rankes being  
brought into this order, and minding in marching, to  
bryng them into battaile, so; to make the heade, the  
first Centurion must be caused to stande still, with the  
first twentie rankes, and the seconde to procede mar-  
ching, and turning on the righte hande, he must go a-  
long the sides of the twentie rankes that stande still, till  
he come to be euen with the other Centurion, where he  
must also stande still, and the thirde Centurion, to pro-  
cede marching, likewise turning on the righte hande,  
and along the sides of the rankes that stande still, must  
go so farre, that he be euen with the other two Centu-  
rians, and he also standing still, the other Centurion  
must followe with his rankes, likewise turning on the  
righte hande, along the sides of the rankes that stande  
still, so farre that he come to the heade of the other, and  
then to stande still, and straight waye two Centurions  
onely, shall departe from the fronte, and go to the backe  
of the battaile, the which cometh to be made in y same  
maner, and with the same order iuste, as a litle afoze I  
haue shewed you. The Velitt muste stande a long, by  
the flanks of the same, according as is disposed in the  
first waye, whiche waye is called redoubling by right  
line,



## *The second Booke of*

line, this is called redoubling by flanke: the first way is more easy, this is with better order, and cometh better to passe, and you maye better correcte it, after your owne maner, for that in redoubling by right line, you must be ruled by the number, because five maketh ten, ten twentie, twentie forty, so that with redoubling by right line, you cannot make a head of fiftene, nor of five and twentie, nor of thirtie, nor of five and thirtie, but you must go where the same number will leade you. And yet it happeneth euery daye in particular affaires, that it is conueniente to make the forward with five hundred, or eight hundred men, so that to redouble by right line, should disorder you: therefore this liketh me better: that difficultie that is, ought most with practise, and with exercise to be made easy. Therefore I say vnto you, how it importeth more then any thing, to haue the souldiours to knowe how to set them selues in aray quickly, and it is necessary to keepe the in this battaile, to exercise them therein, and to make them to go apace, either forward or backward, to passe through difficult places, without troubling the order: for as muche as the souldiours, whiche can do this well, be experte souldiours, and although they haue neuer seen enemies in the face, they maye be called old souldiours, and contrariwise, those whiche can not keepe these orders, though they haue been in a thousand warres, they ought alwayes to be reputed newe souldiours. This is, concerning setting them together, when they are marching in small rankes: but being set, and after being broken by some accident or chaunce, whiche groweth either of the situation, or of the enemy, to make that in a sodaine they may come into order againe, this is the importance and the difficultie, and where is needfull muche exercise, and much practise, and wherein the antiquitie bestowed muche studie. Therefore, it is necessarie to do two thinges, firste to haue this battaile full of counter signes,

ter signes, the other to keepe alwaies this order, that those same men maie stand alwaies in y<sup>e</sup> ranke, which they were firste placed in: as so; in sample, if one haue begon to stande in the seconde, that he stande after alwaie in that, & not only in that selfe same rancke, but in that selfe same place: so; the obseruing whereof (as I haue saide) be necessarie many counter signes. In especially it is requisite, that the Ansigne bee after such sorte countersigned, that companing with the other battels, it may be knowne from them, according as the Conestable, & the Centurions haue plumes of fethers in their heades differente, & easie to be knowne, and that which importeth most, is to ordaine that the peticapitaines bee knowne. Wherevnto the antiquitie had so much care, that they would haue nothing els w<sup>r</sup>itten in their head p<sup>i</sup>eces, but the n<sup>o</sup>ber that they were named by, calling the first, second, thirde, and fourth &c. And yet they were not contented with this, but made euery souldiour to haue w<sup>r</sup>itten in his Targaet, the number of the ranke, and the number of the place, in whiche ranke he was appointed. When the men being countersigned thus, and vsed to stande betwene these limites, it is an easy thing, they being disordered, to set them all againe quickely into order: considering, that the Ansigne standing still, the Centurions, and the Peticapitaynes may gesse their places by the eye, and being brought the left of the lefte, the righte of the righte, with their accustomed distance, the souldiours lead by their rule, and by the differences of the cognisances, maye be quickly in their proper places, no otherwise, then as if the bo;des of a tunne shoulde bee taken a sunder, whiche being firste marked, most easly maye bee set together againe, where the same being not countersigned, were impossible to bring into order any moze. These things, withe diligence and withe exercise are quickely taught, and quickely learned, and being learned, with

How to exercise me, & to take such order, wherby a band of men that were by whatseuer chance disordre, may straightway be brought into order againe.

## *The second Booke of*

difficulty are forgotten: for that the new men, be lead of the olde, and with time, a Province with these exercises, may become thoroughly practised in the warre. It is also necessary to teache them, to tourne them selves all at ones, and when neede requires, to make of the flankes, and of the backe, the fronte, and of the fronte, flankes, or backe, which is moste easy: because it sufficeth that every man do tourne his bodye, towards the same part that he is commaunded, & where they tourne their faces, there the fronte commeth to be. True it is, that when they tourne to any of the flankes, the orders tourne out of their proportion: for that from the bycast to the backe, there is litle difference, and from the one flanke to the other, there is very much distaunce, the which is all contrarie to the ordinarie order of the battaile: therefore it is convenient, that practise, and discretion, do place them as they ought to be: but this is small disorder, for that most easly by themselves, they may remedy it. But that which importeth moze, and where is requisite moze practise, is when a battaile would tourne all at ones, as though it were a whole body, here is mozte to haue great practise, and great discretion, because minding to tourne, as for insample on the lefte hande, the left corner must stande still, and those that be next to him that standeth still, must marche so softly that they that be in the right corner, neede not to runne: otherwise all thing should be confounded. But because it happeneth alwayes, when an armie marcheth from place to place, that the battailes, which are not placed in the fronte, shall bee driuen to fighte not by heade, but either by flanke, or by backe, so that a battaile must in a sodayne make of flanke, or of backe, heade: and minding that like battailes in suche case, maye haue their proportion, as aboue is declared, it is necessary, that they haue the Pikes on the same flanke, that oughte to be head, and the Peticaptaynes, Centurions

▼ What advertisement ought to be vsed in touring aboute a whole band of men, after suche sorte, as though it were but one bodye.



furions, and Conestables, to resort accordingly to their places. Therfore to minde to do this, in plasing them together, you must ordeyne the foure scoze rankes, of five in a ranke, thus: Set all the Pikes in the first twentie rankes, and place the Peticaptaynes therof, five in the firste places, and five in the last: the other thre scoze rankes, which come after, be all of Targaettes, which come to be thre Centuries. Therfore, the firste and the last ranke of euery Centurion, woulde be Peticaptaynes, the Conestable with the Ansigne. and with the Drumme, must stande in the middest of the firste Centurie of Targaets, and the Centurions in the head of euery Centurie. The bande thus ordayned, when you woulde haue the Pikes to come on the left flank, you must redouble Centurie by Centurie, on y<sup>e</sup> right flank: if you woulde haue them to come on the right flank, you must redouble the on the left. And so this battaile tourneth with the Pikes vpon a flank, and the Conestable in the middest: the which fashion it hath marching: but the enemye coming, and the time that it woulde make of flank head, it needeth not but to make euery man to tourne his face, towarde the same flank, where the Pikes be, & then the battaile tourneth with the rankes, and with the heades in the same maner, as is also sayde: so that euery man is in his place, excepte the Centurions, and the Centurions straight way, and without difficultie, place them selues: But when they in marching, should be ordeined to fight on the backe, it is conueniente to ordeyne the rankes after such sorte, that setting them in battaile, the Pikes maye come behinde, and to do this, there is to be kepte no other order, then where in ordering to battaile, by the ordinarie, euery Centurie hath five rankes of Pikes before, to cause that they maye haue them behinde, and in all the other partes to obserue the order, which is declared first.

Howe to order a bande of men after such sorte that they maye make their fronte against the enemye of which flank they list,

Howe a bad of me ought to be ordered, vvhē in marching they should be constrained to fight on their backs.



## The second Booke of

Cosimo. You haue tolde (if I do well remember me) that this maner of exercise, is to be able to bzing these battailes together into an armie, and that this practise, serueth to bee able to order them selues in the same: But if it should happen, that these. CCCC. men, should haue to do an acte seperate, how would you order them?

Fabritio. He that leadeth them, ought then to iudge, where he will place the Pikes, and there to put them, the which doth not repugne in anye parte to the order about witten: for that also, though the same be the maner, that is obserued to fighte a fildes, together with the other battailes, notwithstanding it is a rule, whiche serueth to all those wayes, wherein a band of men should happen to haue to do: but in shewing you the other two wayes of mine propounded, of ordering the battailes, I shall also satisfie you moze to your question: for that either they are neuer vsed, or they are vsed whē a battaile is a lone, and not in companie of other, and to come to the waye of ordering them, with two hoynes I say, that thou oughtest to order the lxxx. rankes, siue to a ranke, in this maner. Place in the middest, one Centurion, & after him xxx. rankes, which must be with two Pikes, on the lefte hande, and with thre Largaettes on the right, and after the firste siue, there muste be put in the twentie following, twentie Peticaptaynes, all betwā the Pikes, and the Largaettes, excepte those whiche beare the Pike, whome maye stande with the Pikes: after these xxx. rankes thus ordered, there is to be placed an other Centurio, and behinde him fiftene rankes of Largaettes: after these, the Conestable betwē the Drum and the Ansigne, who also must haue after him, other fiftene rankes of Largaettes, after this, the third Centurion must be placed, and behinde him, xxx. ranke, in euerye one of whiche, oughte to bee thre Largaettes on the lefte flank, and two Pikes on the right,

How a battaile is made with 3 hoynes.

right, and after the five first rankes, there muste bee xx. Peticaptaynes placed between the Pikes, and the Targaettes: after these rankes, the fourth Centurion must followe. Intending therfore, of these rankes thus ordered, to make a battaile with two hoznes, the first Centurion must stande still, with the xxv. rankes which bee behinde him, after the seconde Centurion must moue, with the fiftene rankes of Targaetts, that bee behinde him, and to tourne on the righte hande, and by by the righte flank of the xxv. rankes, to go so farre, that bee arriue to the xv. ranke, and there to stande still: after, the Conestable must moue, with the fiftene rankes of Targaettes, which be behinde him, and turning likewise on the righte hande, by by the righte flank of the fiftene rankes, that were first moued, must marche so farre, that he come to their heades, and there to stande still: after the thirde Centurion must moue with the xxv. rankes, and with the fourth Centurion, whiche was behinde, and turning by straight, muste go along by the righte flank of the fiftene last rankes of the targaettes, and not to stande still when he is at the heades of them, but to followe marching so farre, that the last ranke of the xxv. may come to bee euen with the rankes behinde. And this done, the Centurion, which was heade of the firste fiftene rankes of Targaettes, must go awaye from thence where bee stode, and go to the backe in the lefte corner: and thus a battaile shall be made of xxv. rankes, after twentie men to a ranke, with two hoznes, vpon euery side of the front one hozne, and euery one, shall haue tenne rankes, five to a ranke, and there shall remayn a space between the two hoznes, as muche as containeth tenne men, whiche tourne their sides, y one to the other. Betwene the two hoznes, the Capitayne shall stande, and on euerye pointe of a hozne, a Centurion: There shall bee also behinde, on euery corner, a Centurion: there shall be two rankes of

## *The second Booke of*

The ordning  
of a battaile  
with a void  
space in the  
middlest.

of Pikes, and xx. Deticaptaynes on euery flank. These  
two hoznes, serue to keepe betwene them the artille-  
rie, when this battaile shoulde haue anye with it, and  
the cariages: The Weliti masse stande a long the  
flankes, vnder the Pikes. But minding to bying this  
hozned battaile, with a void space in the middlest, there  
ought no other to be done, then of fiftene rankes, of  
twentie to a ranke, to take eight rankes, and to place  
them on the pointes of the two hoznes, which then of  
hoznes, become backe of the void space. In this place,  
the cariages are kept, the Capitayne standeth, and the  
Ansigne, but neuer the Artillerie, the which is placcd  
either in the fronte, or a long the flankes. These be the  
wayes, that a battaile may vse when it is constraincd  
to passe alone through suspected places: notwithstanding  
the masse battaile without hoznes, and without anye  
suche void place is better, yet purposing to assure the  
disarmed, the same hozned battaile is necessarye. The  
Suizzers make also many fashions of battailes, among  
which, they make one like vnto a crosse: because in the  
spaces that is betwene the armes thercof, they keepe  
safe their Harkebuters fro the daunger of the enemies:  
but because such battailes be good to fight by them sel-  
ues, and my intent is to shewe, howe manye battailes  
vnited, do fight with the enemye, I will not labour fur-  
ther in describing them. Cosimo. He thinkes I haue be-  
rye well comprehended the way, that ought to be kepto  
to exercise the men in these battailes: But (if I remem-  
ber mee well) you haue saide, howe that besides the ten  
battailes, you ioine to the mayne battaile, a thousande  
extraordinarie Pikes, and five hundred extraordinarie  
Weliti: will you not appointe these to be exercised?

Fabritio. I woulde haue them to be exercised, and  
that with most great diligence: and the Pikes I would  
exercise, at least ansigne after ansigne, in the orders  
of the battailes, as the other: For as muche as these  
shoulde



Shoulde do mee more seruice, then the ordinarie battails, in all particular affaires: as to make guides, to get batties, and to do like thinges: but the Meliti, I woulde exercise at home, without bringing them together, for that their office being to fight a sonder, it is not mete, that they should companie with other, in the common exercises: for that it shall suffice, to exercise them well in the particular exercises. They ought then (as I firste tolde you, now now me thinkes no labour to rehearse it againe) to cause their men to exercise them selues in these battails, wherby they maye know howe to keepe the raye, to know their places, to turne quickly, wher eithen enemy, or situatiō troubleth the: for that, when they knowe how to do this, the place is after easly learned, which a battaile hath to keepe, & what is the office thereof in the armie: and when a Prince, or a cōmon weale, will take the paine, and will vse their diligence in these orders, and in these exercising, it shall alwayes happen that in their countrie, there shall be good souldiours, and they to be superious to their neighbours, and shalbe those, which shall giue, and not receyue the lawes of other men: but (as I haue sayde) the disorder wherein they liue, maketh that they neglect, and do not esteeme these thinges, and therfore our armies be not good: and yet though there were either head, or member naturally vertuous, they cannot shewe it.

Cosimo. What cariages woulde you, that euery one of these battails should haue?

Fabritio. First, I woulde that neither Centurion, nor Peticapayne, should be suffered to ride: and if the Constable would needes ride, I would that he should haue a Mule, and not a horse, I woulde allowe him two cariages, and one to euery Centurion, and two to euery three Peticapaynes, for that so manye we lodge in a lodging, as in the place thereof we shall tell you: So that euery battaile will come to haue xxxvi.

R. i.

carrriages of men.

To what purpose the pikes & veliti, extraordinary must serue.

Neither Centurion nor peticapayne ought not to ride. What cariages the capitaines ought to haue, and the number of cariages requisite to euery bande of men.



## *The second Booke of*

carriages, the whiche I would should carrie of necessity the tentes, the vessels to seeth meate, axes, barres of Iron sufficiente to make the lodinges, and then if they can carrie anye other thing, they maye doo it at their pleasure.

Cosimo. I beleue that the heades of you, ordeyned in euery one of these battayles, be necessarye: albeit, I would doubt, lest that so many commanders, shoulde confound all.

Fabritio. That should be, when it were not referred to one man, but referring it, they cause order, yea, and without them, it is impossible to gouerne an armie: for that a wall, which on euery parte inclineth, requireth rather to haue many pottes, & thicke, although not so strong, then few, though they were strong: because the vertue of one alone, doth not remedie the ruine a farre of. And therefore in the armies, and among euery sennemen, it is conuenient that there be one, of moze life, of moze harte, or at least wise of moze authoritie, who with stomacke, with wordes, and with example, maye keepe them constant, and disposed to fight, & these things of mee declared, be necessary in an armie, as the heads, the Ansignes, and the Drummes, is sene that we haue them all in our armies, but none doth his office. First to minde that the Peticapaynes do the same, for whiche they are ordeyned, it is necessary (as I haue saide) that there be a difference, betwene euery one of them and their men, and that they lodge together, doing their duties, standing in the order with them: for that they placed in their places, be a rule & a temperance, to maintaine the rayes straighte and steele, and it is impossible that they disorder, or disordering, doe not reduce them selues quickly into their places. But we nowe aduaies, doe not vse them to other purpose, then to giue them moze wages, then to other men, and to cause that they doo some particular feat: The very same hapeneth

happenth of the Ansigne bearers, so that they are kept rather to make a faire muster, then so any other warlike vse: but the antiquitie vsed them so guides, and to bring themselves againe into order: so that euery mā, so soon as the Ansigne stode still, knewe the place, that he kept nere to his Ansigne. wherevnto he retourned alwaies: they knew also, how that the same moving or standing, they should staie, or moue: therfore it is necessary in an armie, that there be many bodies, and euery bande of men to haue his Ansigne, and his guide: wherefore hauing this, it is meete that they haue stomackes inough, and by consequence life enough. When the me ought to march according to the Ansigne: & the Ansigne to moue, according to the Drumme, the whiche Drumme well ordered, commaundeth to the armie, the which going with paces, that answereth the time of the same, wil come to kepe easly the orders: so which cause the antiquitie had Shalmes flutes, and soundes perfectly timed: for as much as like as he that danceth, proceedeth with the time of the Musick, and going with the same doeth not erre, even so an armie obeying, in moving it selfe to the same sounde, doeth not disorder: and therfore they varied the sounde, according as they would varye the mocion, and according as they would inflame, or quiete, or staie the mindes, of men: and like as the sounde were diuers, so dyuersly they named them: the sounde Dozico, ingendered constancie, the sounde Frigio, furie: whereby they saye, that Alexander being at the Table, and one sounding the sounde Frigio, it kindled so muche his minde, that he laied hande on his weapons. All these maners should be necessarie to finde againe: and when this shoulde be difficult, at leaste there would not be left behinde those that teache the Souldiour to obeye, the whiche euery man may vary, and ordayne after his owne fashion, so that with practise, hee accustome the cares of his soule

To what purpose Ansignes ought to seme.

For what purpose Drummes ought to be vsed.

The proper tie that soundes of instruments haue in mens mindes.

## *The second Booke of*

blours to knowe it: But nowe adayes of this sounde, there is no other fruite taken fo; the most part, then to make a rumour.

Cosimo. I woulde desire to vnderstande of you, if euer with your selfe you haue discovered, whereof groweth so much vilenesse, and so much disorder, and so much negligence in these dayes of this exercise?

A notable  
discourse of  
the author  
declaring  
vvhether groweth  
so much vilenesse  
disorder &  
negligence  
in these dayes  
concerning  
the exercises  
of ywar.

Fabritio. With a good will I will tell you the same that I thinke. You know how that of the excellent men of warre, there hath been named many in Europe, fewe in Affric, and lesse in Asia: this grew fo; that these two last partes of the worlde, haue had not past one kingdome o; two, and fewe common weales but Europe onely, hath had many kingdomes, and infinite comon weales, where men became excellent, and did shewe their vertue, according as they were set a worke, and brought befo; their Prince, o; common weale, o; King that be be: it followeth the refo;e, that where be many dominions, there rise many valiaunt men, and where be fewe, fewe. In Asia is founde Ninus, Cirus, Artaxerxes, Mithredates: and very fewe other, that to these may be compared. In Affric, is named (lettyng stande the same auncient Egypt) Masinissa, Iugurta, and those Capitaynes, which of the Carthaginens common weale were nourished, whome also in respecte to those of Europe are most few: because in Europe be excellent men without number, and so many mo;e shoulde be, if together with those shoulde be named the other, that be through the malignitie of time extinct: fo; that the worlde hath bene most vertuous, where hath bene most states, which haue favoured vertue of necessitie, o; fo; other humaine passion. There rose therfo;e in Asia, few excellent men: because the same Province was all vnder one kingdome, in the whiche fo; the greatnesse thereof, the same standyng fo; the most part of time idle, there coulde not growe men in



doinges excellent. In Africke there happened the very same, yet there were nourished moze then in Asia, by reason of the Carthaginens common weale: for that in common weales, there grow moze excellent men, then in kingdomes: because in common weales for the most part, vertue is honoured, in kingdomes it is held backe: whereby groweth, that in the one, vertuous men are nourished, in the other they are extincte. Therefore hee that shall consider the partes of Europe, shall finde it to haue been full of common weales, and of pzincedomes, the which for feare that the one had of the other, they were constrained to kepe liuely the warlike orders, & to honour them, which in those most pzenailed: for that in Grece besides the kingdome of the Macdonians, there were many common weales, & in euery of the were bred most excellent men. In Italie, were the Romanes, the Hannites, the Toscanes, the Gallie Cisalpine. Fraunce, and Almaine, were full of common weales and pzincedomes. Spaine likewise: and although in comparison of the Romanes, there are named fewe other, it groweth through the malignitie of the writers, whom followe fortune, and to them for the most part it sufficed, to honour the conquerours: but it standeth not with reason, that betwene the Hannites, and the Toscanes, whom fought. CL. yeres with the Romanes people, before they were overcome, there should not growe exceeding many excellent men. And so likewise in Fraunce, and in Spaine: but that vertue which the writers did not celebrare in particuler men, they celebrated generally in the people, where they exalte to the starres, the obstinateneſſe that was in them, to defende their libertie. Being then true, that where be most dominions, there riseth most valiant men, it followeth of necessity, that extingnishing those, vertue is extinct straightway, the occasion decaying, which maketh men vertuous. Therefore, the Ro-



## The Second Booke of

maine Empire being after increased, and hauing exting-  
quished all the common weales, and Princedomes of  
Europe, and of Affrike, and so; the most parte those of  
Asia, it left not anye waye to vertue, excepte Rome:  
wherby grewe, that vertuous men began to be as few  
in Europe, as in Asia: the whiche vertue, came after to  
the last cast: so; as much, as all the vertue being redu-  
ced to Rome, so sone as y same was corrupted, almost  
all the worlde came to be corrupted: & the Scythian peo-  
ple, were able to come to spoile the same Empire, the  
which had extingquished the vertue of other, and knew  
not howe to maintaine their owne: and after, although  
thzough the inundation of those barbarous nations, the  
same Empire was deuided into many partes, this ver-  
tue is not reued: The one cause is, so; that it greueth  
them muche, to take againe the orders when they are  
marde, the other, because the maner of liuing nowe a-  
dayes, hauing respecte to the Christian Religion,  
commaundeth not the same necessitie to men, to de-  
sende them selues, whiche in olde time was so; that  
then, the men ouercome in warre, either were killed, or  
remayned perpetuall slaves, where they lead their li-  
ues most miserably: The towne ouercome, either  
were rased, or the inhabitants thereof diuen out, their  
goddes taken awaie, sent disperfed thzough the worlde:  
so that the vanquished in warre, suffered all extrême  
miserie: of this feare, men being made afraied, they  
were diuen to keepe liuely the warlike exercises, and  
they honoured suche as were excellent in them: But  
now adaiies, this feare so; the most part is not regarded  
of those that are ouercome, fewe bee killed, none is kept  
long in prison: so; that with sacclitic, they are set at li-  
bertie: the Cities also, which a thousand times hane re-  
belled, are not destroyed, the men wherof, are let a lone  
with their gods, so that the greatest hurt that is feared,  
is but a taske: in so muche, that men will not submit  
them

The causes  
why the au-  
cient orders  
are neglec-  
ted.

them selues to the orders of warre, & to abide allwaies vnder those, to auoide the perilles wherof they are litle afraied: again these Prouinces of Europe, bee vnder a vertie fewe heades, in respecte as it hath bene in times past: so; that all Fraunce, obeieith one king, all Spaine, an other: Italie is a fewe partes, so that the weak Cities, are defended with leauing to him that ouercometh, and the strong states, so; the causes aforesaide, feare no such extreeme ruine.

Cosimo. Yet their hath bene seene many towncs that haue bene sacked within this xrb. yeres, and lost their dominions, whose insample, ought to teache other how to liue, and to take again some of those olde orders.

Fabritio. You saye true: but if you note what towncs haue gone to sacke, you shall not finde that they haue bene the heades of states, but of the members: as was seene sacked Torton, and not Milaine: Capua, and not Naples, Bescia, & not Venice, Rauenna, & not Rome: the which ensamples maketh those that gouerne, not to chaunge their purposes, but rather maketh them to stande moze in their opinion, to bee able to redeme again all thinges with taskes, and so; this, they will not submit them selues to the troubles of the exercises of warre, seeming vnto them partly not necessary, partly, an intricate matter, whiche they vnderstande not: Those other, which be subiects to them, whom such ensamples ought to make afraied, haue no power to remedy it: and those Princes, that haue ones lost their states, are no moze able, & those which as yet keepe thē, know not, no; will not. Because they will without any disease rain by fortune, & not by their vertue, so; y in the world being but litle vertue, they see fortune gouerneth all things. And they will haue it to rule thē, not they to rule it. And to proue this y I haue discoursed to be true, consider Almaine, in the which, because there is manye Princedomes, and common weales, there is much vertue

## The second Booke of

Vertue, and all the same, which in the present seruice of warre is good, dependeth if the ensamples of those people, who being all gelious of their states, fearing seruitude, the which in other places is not feared, they all maintaine them selues Lordes, and honourable: this that I haue sayde, shall suffice to shewe the occasions of the present vtilitie, according to my opinion: I can not tell whether it seme the same vnto you, or whether there be growen in you any doubting.

Cosimo. None, but rather I vnderstande all very well: onely I desire touning to our principall matter, to vnderstande of you, howe you woulde ordeine the hozses with these battayles, and howe many, and howe they should be gouerned, and how armed.

Fabritio. You thinke peraduenture, that I haue left it behinde: wherco do not maruaile, for that I purpose for two causes, to speake thereof litle, the one is, for that the strength, and the importaunce of an armie, is the footemen, the other is, because this part of seruice of warre, is lesse corrupted then the same of footemen. For that though it be not stronger then the olde, yet it may compare with the same, neuerthelesse there hath been spoke a litle afoze, of the maner of exercising them.

The arming  
of horsemen.

And concerning the arming them, I would arme them as they do at this present, as well the light hozsemen, as the men of armes: but the light hozsemen, I would that they should be all Crossebowe shooters, with some Harkebuters among them: the which though in the other affaires of warre, they be litle profitable, they be for this most profitable, to make afraide the countrey men, & to bynde them from a passage, that were kept of them: because a Harkebuter shall scare them more then. xx. other armed. But comming to the number, I say, that hauing taken in hand, to imitate the seruice of warre of the Romanes, I would not ordeine more then. 3. hundred hozse, profitable for every maine battel, of which I would

The vvea-  
pons that  
light horse-  
men should  
haue.

The nōber  
of horsemen  
requisite a  
maie bat-  
telle of sixe  
thousand  
men.

would that there were. **CL.** men of armes, and. **CL.** light hoysmen, and I would geue to euery one of these partes, a heade, making after among them fiftene peticapitaines for a bande, giuing to euery one of them a Trompet and a standard: I would that euery ten men of armes, should haue five carriages, and euery tenne light hoysmen twow, the which as those of the sœtlemen, should carrie the tentes, the bestelles, and the ares, and the flakes, and the rest of their other harnesse. No: beleue not but that it is disorder, where the men of armes haue to their seruice foure hoysse, because such a thing is a corrupt vse: for that the men of armes in Almaine, are sœne to bee with their hoysse alone, euery twentye of the hauing onely a carte, that carrieth after them their necessarye thinges. The Romane hoysmen, were likewise alone: true it is, that the Triary lodged nere them which were bounde to minister helpe vnto them, in the keeping of their hoyses: the which maye easly be imitated of vs, as in the distributing of the lodgings, I shall shewe you, the same then that the Romanes did, & that whiche the Dutchemen do nowe adaies, wee maye doo also, yea, not doing it, wee erre. These hoyses ordayned & appointed together with a maine battaile, may sometimes be put together, when the battailos bee assembled, and to cause that betwœene them bee made some sight of assault, the which should be moze to make them acquainted together, then for any other necessitie. But nowe of this part, there hath bene spoken sufficiently, wherefoze let vs fashion the armie, to bee able to come into the fielde against theemie, and hope to winne it: which thing is the ende, for which the exercise of warre is ordeyned, and so much studye therein bestowed.

(.)

L.i.

*The*

The number of carriages that men of armes and light hoysmen ought to haue.



*The thirde booke of the arte of warre,*  
*of Nicholas Machiavel, Citezen and Secretarie*  
*of Florence, vnto Laurence*  
*Philip Strozze.*  
(.s.)

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Cosimo.



Seeing that we chaunge rea-  
soning, I wil that y<sup>e</sup> demaunder  
be chaūged: because I would  
not bee thoughte presump-  
tuous, the whiche I haue al-  
waies blamed in other: ther-  
fore, I resigne the Dictato-  
ship, and giue this authoritie  
to him that will haue it, of  
these my other friendes.

Zanobi. We would be most glad, that you should pro-  
ceede, but seeing that you will not, yet tell at least, which  
of vs shall succede in your place.

Cosimo. I will giue this charge to signor Fabritio.

Fabritio. I am content to take it, and I will that we  
followe the Venecian custome, that is, that the yon-  
gest speake firste: because this being an exercise for  
young men, I perswade my selfe, that young men, bee  
most apt to reason therof, as they be most ready to exe-  
cute it.

Cosimo. Then it falleth to you Luigi: and as I haue  
pleasure of suche a successour, so you shall satisfie your  
selfe of suche a demaunder: therefore I praye you,  
let vs tourne to the matter, and let vs lese no moze  
time.

Fabritio. I am certayne, that to minde to shewe  
well, howe an armie is prepared, to fight a fiede, it  
shoulde be necessarie to declare, howe the Grekes, and  
the Romanes ordeyned the bandes of their armies:  
Notwith-

withstanding, you your selues, being able to read, and to consider these thinges, by meanes of the auncient writers, I will passe ouer many particulars: and I will onely bring in those thinges, which I thinke necessary to imitate, minding at this time, to geue to our exercise of warre, some parte of perfection: The whiche shall make, that in one instante I shall shewe you, howe an armie is prepared to the field, and how it doeth encounter in the verie fight, and how it may be exercised in the same. The greatest disorder, that they make whiche ordeine an armie to the field, is in giuing the only one fronte, and to binde them to one bunt and to one sort: the which groweth, of hauing lost the waie, that the antiquitie vsed to receiue one bande within an other because without this waie, they can neither succour the foremost, nor defende them, nor succede in the fight in their order: the whiche of the Romanes, it is most excellently well obserued. Therefore, purposing to shewe this waie, I saie, howe that the Romaynes deuised into iij. partes euery Legion, in Hastati, Principi, & Triarij, of whiche, the Hastati were placed in the first fronte, or forward of the armie, with the orders thicke and sure, behinde whom were the Principi, but placed with their orders more thinne: after these, they set the Triarij, & with so muche thinnes of orders, that they might, if neede were, receyue betwene them the Principi, and the Hastati. They had besides these, the Slingers, and Crosseboweshoters, & the other light armed, which stode not in these orders, but they placed them in the head of the armie, betwene the horses & the other bandes of souldiers: therefore these light armed, began the fight, if they ouercame (whiche happened seldome times) they followed the victorie: if they were repulced, they retired by the flankes of the armie, or by such spaces ordained for such purposes, & they brought themselves among the vnarmed: after the departure of

The greatest disorder that is vsed now a daies in pitching of a fildes.

The order howe a Roman Legion was appointed to fight

L. ij.

whom

## The thirde Booke of

whom, the Bassati encountered with the enemye, the which if they saw themselves to be overcome, they retired by a litle, and litle, by the rarenesse of the orders betwene the Principi, and together with those they renewed the fight: if these also were repulced, they retired al in the rarenesse of the orders of the Triari, & altogether on a heape began againe the fight: and then if they were overcome, there was no more remedy, because there remained no more waies to renewe them againe. The horses stode on the corners of the armie, to the likenesse of two winges to a body, & some whiles, they fought with the enemies horses, an other while they rescued the souldiers, according as neede required. This way of renewing the selues thre times, is almost impossible to overcome: for that, fortune must thre times forsake thee, and the enemye to haue so much strength, that thre times he may overcome thee. The Grekes, had not in their Falangi, this maner of renewing the selues, and although in those were many heades & many orders notwithstanding, they made one body, or els one head: the maner that they kept in rescuing the one the other, was not to retire the one order within the other, as the Romans, but to enter the one man into the place of the other: the which they did in this maner. Their Falangi brought into rankes, and admit that they put in a ranke fiftie men comming after with their heade againste the enemye, of all the rankes the foremoste sure, mighte fight: Because their Lances, the whiche they called Sarisse, were so long, that the first ranke passed with the head of their Launces, oute the first ranke: then in fightyng, if any of the first, either through death, or through woundes fell, straight waies there entered into his place, the same man, that was behinde in the seconde ranke, and in the place that remained boide of the seconde, the same man entred, which was behinde hym in the thirde, and thus successiuelye, in a sodaine the

The maner  
that the  
Grekes used  
in their Falangi, when  
they fought  
against their  
enemies.

the rankes behinde, restozed the faultes of those afoze,  
so that the rankes alwayes remayned whole, and no  
place of the fighters was boide, except the last rankes,  
the whiche came to consume, hauing not men behinde  
their backs, whome might restoze them: So that the  
hurt that the firste rankes suffered, consumed the last,  
and the first remayned alwaies whole: and thus these  
Falangi by their order, might sooner be consumed, then  
broken, for that the grosse bodye, made it moze immo-  
ueable. The Romanes vsed at the beginning the Fa-  
langi, and did set in order their Legiōs like vnto them:  
after, this order pleased them not, and they deuided the  
Legions into many bodies, that is, in bandes and com-  
panies: Because they iudged (as a litle afoze I sayde)  
that the same bodye, should haue neede of manye Capi-  
taynes, and that it shoulde be made of sundry partes,  
so that euery one by it selfe, might be governed. The  
maine battailes of the Swizzers, vse at this present, all  
the maners of the Falangi, as wel in ordering it grosse,  
and whole, as in rescuing the one the other: and in pit-  
ching the field, they set the maine battailes, the one to  
the sides of the other: & though they set them the one be-  
hinde the other, they haue no waye, y the first retiring  
it self, maye be receyued of y second, but they vse this  
order, to the intent to be able to succour the one y other  
where they put a mayne battaile befoze, & an other be-  
hinde the same on the right hand: so that if the first haue  
neede of helpe, y then the other may make fozewarde, &  
succour it: the thirde maine battaile, they put behinde  
these, but distant from them, a Harkebus shot: this they  
do, for that the saide two maine battailes being repul-  
ced, this maye make fozewarde, & haue space for them  
selues, & for the repulced, & the same that marcheth foze-  
ward, to auoide the iustling of the one the other: so; as  
much as a grosse multitude, cannot be receyued as a li-  
tle body: & therefore, the litle bodies being destinde,  
which

The order  
that the Su-  
izzers vse in  
their maine  
battailes  
vwhen they  
fight.



### *The third Booke of*

which were in a Romaine Legion, might be placed in such wise, that they might receiue betwene them and rescue the one the other. And to proue this order of the Swizzers not to be so good, as the auncient Romaines, many ensamples of the Romain Legions doe declare, when they fought with the Grekes Salangi, where alwaies they were consumed of them: so that the kinde of their weapons (as I haue saide afoze) & this waie of renuing themselves, could do moze, then the massiu- nesse of the Salangi. Having therfore with these ensa- ples to ordaine an armie, I haue thought good, partly to retaine the maner of arming & the orders of the Grekes Salangi, and partely of the Romain Legions and ther- fore I haue saide, that I woulde haue in a maine bat- taile, two thousand pikes, which be the weapōs of the Macedonickall Salangi, and three thousand Targaettes with swordes, which be the Romain weapons: I haue deuised the main battaile, into .x. battailes, as the Ro- maines their Legions: into ten Cohortes: I haue orde- ned the Meliti, that is the light armed to begin the fight as the Romaines vsed: and like as the weapons being mingled, do participate of thone and of the other na- tion, so the orders also doe participate: I haue ordai- ned, that euery battaile shall haue v. rankes of Pikes in the fronte, and the rest of Targaettes, to be able with the fronte, to withstande the hozses, and to enter easly into the battaile of the enemies on fote, hauing in the firste fronte, or batwarde, Pikes, as well as the enemye, the which shall suffice me to withstand them, the Targatettes after to overcome them. And if you note the vertue of this order you shal see all these wea- pons, to doe fully their office, so that the Pikes, be profitable against the hozses, & when they come against the fote menne, they doe theyr office well, befoze the fight throug together, because so sone as they presse together, they become vnprofitable: wherefore, the  
Swizzers

Howe to ap-  
pointe a  
maine bat-  
taile vvith  
armour and  
weapons &  
to order the  
same after  
the Greeke  
& Romaine  
maner.

Swizzers to auoide this inconuenience, put after euerye  
thre rankes of Pikes, a ranke of Halberdes, the whiche  
they do to make roome to the Pikes, which is not yet so  
much as suffiseth. When putting our Pikes asoze, and  
the Targaettes behinde, they come to withstande the  
horses, and in the beginning of the fight, they open the  
rayes, and molest the footemen: But when the fight is  
thrust together, and that they become vnprofitable, the  
Targaettes and swordes succede, which may in euery  
narowe place be handled.

Luigi. Wee looke nowe with desire to vnderstande,  
howe you would ordeyne the armie to fight the fiede,  
with these weapons, and with these order.

Fabritio. And I will not nowe shewe you other, then  
this: you haue to vnderstande, how that in an ordinarie  
Romane armie, which they call a Consull armie, there  
were no moze, then two Legions of Romane Citizens  
which were five hundred horse, and about aleuen thou-  
sande footemen: they had besides as many moze foot-  
men and horsemen, whiche were sente them from their  
friendes & confederates, whome they diuided into two  
partes, and called the one, the right horne & the other the  
left horne: noz they neuer permitted, that these aiding  
footemen, should passe the nōber of the footemen of their  
Legions, they were well contented, that the number  
of those horse, should be moze then theirs: with this ar-  
mie, which was of xxiij. thousand footemen, & about two  
thousande good horse, a Consul executed all affaires, and  
went to all enterprises: yet when it was needefull to set  
against a greater force, two Consules ioyned together  
with two armies. You ought also to note in especially,  
that in all the thre principall actes, which an armie doth  
that is, to march, to incampe, and to fight, the Romanes  
used to put their Legions in the middeste, soz that they  
would, that the same power, wherein they most tru-  
sted, should be mozte vnited, as in the reasoning of

The number  
of men that  
was in a  
Consulles  
armie.

How the  
Romanes  
placed their  
Legions in  
the field.

these

### *The third Booke of*

these thre actes, shall be shewed you: those aiding soute-  
men, though the practise they had with the Legion  
Souldiours, were as profitable as they, because they  
were instructed, according as the souldiours of the Le-  
gions were, and therefore, in like maner in pitching the  
field, they pitched. Then he that knoweth how the Ro-  
maines disposed a Legion in their armie, to fight a field,  
knoweth how they disposed all: therfore, hauing tolde  
you how they deuised a Legion into thre bandes, and  
how the one bande receiued the other, I haue then tolde  
you, how al tharmie in a fiede, was ordained. Where-  
fore, I minding to ordain a field like vnto y<sup>e</sup> Romaines,  
as they had twoo Legions, I will take .ij. main batai-  
les, & these being disposed, the disposicion of all an ar-  
mie shalbe vnderstode therby: bycause in ioynning more  
men, there is no other to be doen, then to ingrosse the  
orders: I thinke I neede not to rehearse how many men  
a maine battaile hath, & howe it hath ten batailles, and  
what heades bee in a battaile, and what weapons they  
haue, and which be the ordinarie Pikes and Celiti, and  
which the extraordinarie so; that a litle a soze I tolde you  
if bestinally, and I willed you to kepe it in memorie as  
a necessarie thing to purpose, to vnderstande all the o-  
ther orders: and therfore I will come to the demonst-  
ration of the order without repeating it any more: He  
thinkes good, that the ten batailles of one main battaile  
be set on the left flanke, and the tenne other, of the o-  
ther main battaile, on the right: these that are placed  
on the left flanke, be ordeined in this maner, there is  
put five batailles the one to the side of the other in the  
fronte, after suche sozte, that betwene the one and the  
other, there remaine a space of thre yardes, whiche  
come to occupie so; largenesse. Cvi. yardes, of ground,  
and so; length thirtie: behinde these five batailles, I  
would put thre other distante by right line from the  
firste, thirtie yardes: two of the whiche, should come  
behinde

How to or-  
der in armie  
in the fiede  
to fighte a  
battaile, ac-  
cording to  
the munde  
of the au-  
thour.



behinde by right line, to the uttermoste of the five, and the other shoulde keepe the space in the midst, and so these three, shall come to occupie for breadth and length, as much space as the five doth. But where the five haue betwene the one, and the other, a distaunce of three yardes, these shall haue a distaunce of xvj. yardes. After these, I woulde place the two last battailes, in like manner behinde the three by right line, and distaunte from those three, thirtie yardes, and I woulde place eche of them, behinde the uttermost part of the three, so that the space, which shoulde remayne betwene the one and the other, shoulde bee lxviij. yardes: then all these battailes thus ordered, will take in breadth Cvi. yardes, and in length CL. The extraordinarie Pikes, I woulde descend a long the flanches of these battailes, on the lefte side, distaunt from them fiftene yardes, making Cxliij. rankes, vij. to a ranke, after such sort, that they may impale with their length, all the left side of the ten battailes in the same wise, declared of me to be ordained: & there shall remaine fourtie rankes to keepe the carriages, and the vnarmed, which ought to remayne in the taile of the armie, distributing the Peticaptaynes, and the Centurions, in their places: and of the three Conestables, I woulde place one in the head, the other in the midst, the thirde in the last ranke, the which shoulde execute the office of a Vergibudoze, whome the antiquitie so called him, that was appointed to the backe of the armie. But retourning to the heade of the armie, I saye howe that I woulde place nere to the extraordinarie Pikes, the Meliti extraordinarie, whiche you knowe to bee five hundreded, and I woulde giue them a space of xxx. yardes: on the side of these likewise on the lefte hande, I woulde place the men of armes, and I woulde they shoulde haue a space of a Cxij. yardes: after these, the light horsemen, to whome I woulde appointe as much grounde to stande in, as the men of armes haue: the oze

Hovve the extraordinarie Pikes be placed in the set battaile.

the place vvhere the extraordinary archers and harkabutters, and the men of armes and light horsemen oughte to stande vvhen the field is pitched, and goeth to fight the battaile.



## *The thirde Booke of*

The ordinarie archers and harquebutters are placed about their owne battailes.

The place where the generall head of a maine battaile must stand when the same power of men is appointed to fight.

What men a general capitaine of a maine battaile ought to haue about him.

The place where a general capitaine of all the armie must stand when the battaile is ready to bee fought, and what number of chiefe men ought to be about him.

ordinarie Meliti, I would leaue aboute their owne battailes, who should stande in those spaces, whiche I appointe betwene the one battaile and the other: whome should be as their ministers, if sometime I thought not good to place them vnder the extraordinary Pikes: in doing or not doing wherof, I would procede, according as should tourne best to my purpose. The generall head of all the maine battaile, I would place in y<sup>e</sup> same space that were betwene the first and the second order of the battailes, or els in the head, and in the same space, that is betwene the last battaile of the first ffile, and the extraordinary Pikes, according as best should serue my purpose, with thirtie or fourtie chosen men about him, that knewe by prudence, howe to execute a commission, and by force, to withstande a violence, and they to be also betwene the Drumme and the Ansigne: this is the order with the which I would dispose a maine battaile, which should be the disposing of halfe the armie, and it should take in breadth three hundred fourescore & two yardes, and in length as much as aboue is saide, not accounting the space that the same part of the extraordinary Pikes will take, which must make a defence for the vnarmed, which will be about. lxxv. yardes: the other maine battaile, I would dispose on the right side, after the same maner iust, as I haue disposed that on the left, leauing betwene the one maine battaile & the other, a space of. xxij. yardes: in the head of which space, I would set some litle cariages of artillerie, behinde the which, should stande the generall capitaine of all the armie, & should haue about him with the Trumpet, and with the Capitaine standerde, two hundred men at the least, chosen to bee on fote the most part, amongst which there should bee tenne or more, more to execute all commaundementes, and should bee in suche wyse on horsebacke and armed, that they might bee on horsebacke, and on fote, according as neede should.

Should require. The artillerie of the armie, suffiseth ten Cannons, for the winning of Townes, whose shotte should not passe fiftie pounde: the whiche in the fildes should serue mee more for defence of the campe, then for to fight the battaile: The other artillerie, should be rather of ten, then of sixtene pounde the shotte: this I would place afoze on the front of all the armie, if sometime the countrie should not stande in such wise, that I mighte place it by the flanke in a sure place, where it mighte not of the enemy be in daunger: this fashion of an armie thus ordered, may in fighting, vse the order of the *Salangi*, and the order of the *Romane Legions*: so that in the fronte, be *Pikes*, all the men be set in the rankes, after such sorte, that incountering with the enemy, and withstanding him, maye after the vse of the *Salangi*, restore the firste rankes, with those behinde: on the other parte, if they be charged so sorte, that they be constrained to breake the orders, and to retire themselves, they maye enter into the voide places of the seconde battailes, which they haue behinde them, & vnite their selues with them, and making a new force, withstande the enemy, and ouercome him: and when this sufficeth not, they may in the verie same maner, retire themselves the seconde time, and the third fight: so that in this order, concerning to fight, there is to renewe themselves, both according to the *Graeke* maner, and according to the *Romane*: concerning the strength of the armie, there cannot be ordayned a more stronger: for as much, as the one & the other hozne therof, is exceedingly well replenished, both with heades, and weapons, nor there remayneth weake, other then the part behinde of the vnarmed, and the same also, hath the flankes impaled with the extraordinary *Pikes*: nor the enemy can not of anye parte assaulte it, where he shall not finde it well appointed, and the hinder parte can not be assaulted: Because there can not be an enemy, that hath so

¶ ii.

much

How many canons is requisite for an armie, & of what size they ought to be.

Where the artillerie ought to be placed where tharmie is needie to fight.

An armie that vvere ordered as aboue is declared, maie in fighting, vse the *Graeke* maner, & the *Romane* fashion.

## The thirde Booke of

much puissance, whome equallye maye assault thee on enerye side : for that hee having so great a power, thou oughtest not then to matche thy selfe in the field with him: but when he were three times more then thou, and as well appointed as thou, hee doth weaken him selfe in assaulting thee in divers places, one part that thou beatekest, will cause all the rest go to naughte : concerning horses, although he chaunce to haue more then thine, thou needest not feare: for that the orders of the Pikes, which impale thee, defende thee from all violence of them, although thy horses were repulced. The heades besides this, be disposed in such place, that they may easily commande, and obeye: the spaces that be between the one battaile, and the other, and betwene the one order, and the other, not onely serue to be able to receyue the one the other, but also to giue place to the messengers, whiche should go and come by order of the Capitayne. And as I tolde you firste, howe the Romanes had for an armie, aboute foure and twentie thousande men, euen so this oughte to be: and as the other souldiours take ensample of the Legions, for the maner of fighting, & the fashion of the armie, so those souldiours, whiche you shoulde ioyne to oure two mayne battailes, oughte to take the forme & order of them: whereof hauing put you an ensample, it is an easie matter to imitate it, for that increasing, either two other mayne battailes vnto the armie, or as many other souldiours as they be, there is no other to be done, then to double the orders, and where was put tenne battailes on the lefte parte, to put twentie, either ingrossing, or dissending the orders, according as the place, or the enemye shoulde compell thee.

Luigi. Surely sir I imagine in suche wise of this armie, that mee thinkes I nowe see it, and I burne with a desire to see it incounter, and I woulde for nothing in the worlde, that you shoulde become Fabius Maximus  
inter-

To what purpose the spaces that be betwene every bande of men do serue.



intending to kepe the enemy at a baye, and to deferre the day of battaile: because I would saye worse of you, then the Romaine people sayde of him.

Fabritio. Doubt not: Do you not heare the artillery? The descrip-  
 Durs haue already shot, but little hurt the enemy: and tion of a bat-  
 the extraordinarye Meliti, issuing out of their places to- taile that is  
 gether with the lighte horsemen, mosse speedely a fighting.  
 and with mosse meruailous furie, and greatest crye that maye be, they assault the enemy: whose artillerie hath discharged ones, and hath passed ouer the heades of our souldiers, without doing them any hurte, & because it cannot shote the seconde time, the Meliti, & our horsemen, haue nowe gotten it, and the enemies for to defende it, are come soe warde, so that neither oure ordinaunce, nor the enemies, can anye more do their office. See with howe much vertue, strength and agilitie our men fighteth, and with howe much knowledge through the exercise, which hath made them to abide, and by the confidence, that they haue in the armie, the whiche, see, howe with the pace thereof, and with the men of armes on the sides, it marcheth in good order, to giue the charge on the aduersarie: See our artillerie, whiche to giue them place, and to leaue them the space free, is retired by the same space, from whence the Meliti issued: See howe the Capitayn encourageth them, sheweth them the victorie certaine: See howe the Meliti and light horsemen bee enlarged, and returned on the flanks of the army, to seeke and view, if they may by the flanke, do anye iniurie to the aduersaries: behold howe the armies be affronted. See with howe much valiauntnesse they haue withstood the violence of the enemies, and with howe much silence, & howe the Captayne commaundeth the men of armes, y they sustayn, & not charge, and y they breake not from the order of the souldiers: see howe our lighte horsemen be gone, to giue the charge on a bande of the enemies, Harke huters, which would haue hurt oure men



### *The third Booke of*

men by flanke, and how the enemies horse haue succoured them, so that tourned betwene the one & the other horse, they cannot shote, but are faine to retire behind their owne battaile: see with what furie our Pikes doe also affront, and how the footemen be now so nere together the one to the other, that the Pikes can no more be occupied: so by according to the knowledge, learned of vs, our pikes do retire a litle & a litle betwene the targattes. See how in this while a great bande of men of armes of the enemies, haue charged our men of armes on the lefte side, and how ours, according to knowledge bee retired vnder the extraordinary Pikes, & with the helpe of those giuing againe a fresh charge, haue repulced & aduersaries, & slaine a good part of the: in so much, that the ordinary pikes of the first battailes, be hidden betwene the raies of the Targaettes, they hauing lefte the sight to the Targaet men: whom you may see, with how much vertue, securitie, and leasure, they kill the enemy: see you not how much by fighting, & orders be thrust together? That they can scarce wield their swords. Beholde with how much furie the enemies moue: because being armed with the pike, and with the sword vnprofitable (the one for being to long, the other for finding the enemy to wel armed) in part they fall hurt or deade, in parte they flie. See they flie on the righte corner, they flie also on the lefte: behold, the victorie is ours. Haue not we wonne a field most happely? But with more happinesse it should bee wonne, if it were graunted me to put it in acte. And see, how there needed not the helpe of the seconde, nor of the thirde order: for our first fronte hath sufficed to euermore them: in this parte, I haue no other to say vnto you, then to resolve if any doubt be growen you.

Luigi. You haue with so much furie wonne this felde, that I so much meruaile and am so astonied, that I beleue that I am not able to expresse, if any doubt

doubt remaine in my minde: yet trusting in your prudence, I will be so bolde to tell the same that I vnderstande. Tell mee first, why made you not your ordinaunce to shote moze then ones? And why straightwaye you made them to retire into the armie, noz after made no mention of them? We thought also, that you leueled the artillerie of the enemie high, and appointed it after your owne deuise: the which might verie well be, yet when it should happen, as I beleue it chaunceth often, that they strike the rankes, what remedie haue you? And seeing that I haue begun of the artillerie, I will finish all this question, to the intent I neede not to reason thereof anye moze. I haue hearde manye dispraise the armour and the orders of the aunciente armies, arguing, howe now a dayes, they can do litle, but rather should bee altogether vnprofitable, hauing respect to the furie of the artillerie: because, this breaketh the orders, and passeth the armour in suche wise, that it seemeth vnto them a foolishnesse to make an order, which cannot be kepte, and to take paine to beare a harneis, that cannot defend a man. Fabricio. This question of yours (because it hath many heades) hath neede of a long aunswere. It is true, that I made not the artillerye to shote moze then ones, and also of the same ones, I stood in doubt: the occasion was, for as muche as it importeth moze, for one to take hede not to be strikē, then it importeth to strike the enemie. You haue to vnderstande, that so purpose that a peece of ordinaunce hurte you not, it is necessary either to stande where it can not retche you, or to get behinde a wall, or behinde a banke: other thing there is not that can withholde it: and it is needefull also, that the one and the other be moste strong. Those Capitaynes whiche come to fight a fildc, cannot stande behinde a wall, or behinde bankes, noz where they may not be retched: therfoze it is mete for them, seeing they cannot finde away: to defende the, to finde some meane,

Questions  
concerning  
the shooting  
of ordinaunce

An answers  
to the ques-  
tions that  
were de-  
maunded, co-  
cerning the  
shooting the  
ordinaunce.

by

## The third Booke of

by the which they maye be least hurte: no: they can not finde any other way, then to pꝛeuent it quickly: the way to pꝛeuent it, is to go to finde it out of hande, and hastily not at leasure and in a heape: fo: that thꝛough spꝛede, the blowe is not suffered to be redoubled, and by the thinnesse, lesse number of men maye bee hurte. This, a bande of men oꝛdered, can not doo: because if the same marche hastily, it groweth out of oꝛder: if it go scattered the enemye shall haue no paine to bꝛeake it, fo: that it bꝛeaketh by it selfe: and therefore, I oꝛdered the armie after such sort, that it might do the one thing and the other: fo: as muche as hauing set in the coꝛners therof, a thousande Meliti, I appointed that after that our oꝛdinance had shotte, they shoulde issue out together with the light hoꝛsemen, to get the enemies artillerie: and therefore, I made not my oꝛdinance to shote againe, to the intende, to giue no time to the enemye to shote: Because space coulde not be giuen to mee, and taken from other men, and fo: the same occasion, where I made my oꝛdinance not to shote the second time, was fo: that I woulde not haue suffered the enemye to haue shotte at all, if I had coulde: seeing that to minde that to the enemies artillerie be vnprofitable, there is no other remedye, but to assault it spꝛedely: fo: as muche as if the enemies forsake it, thou takest it, if they will defende it, it is requisite that they leaue it behinde, so that being possessed of enemies, & of friends, it cannot shote. I would bolde, y without insamples these reasons shoulde suffice you, yet being able to shew old ensamples, to pꝛoue my sayinges true, I will. Mentidio comming to fighte a field with the Parthians, whose strength fo: the most part, consisted in bowes and arrowes, he suffered them almost to come harde to his campe, befoze he dꝛew out his armie, the whiche onely he dyd, to bee able quicklye to pꝛeuent them: and not to giue them space to shote. Cesar when hee was in Fraunce, maketh mention, that

The best remedie to a-  
uoid the  
hurt that  
the enemye  
in the fild  
maie do  
with his oꝛ-  
dinance.

A policie a-  
gainst bowes  
and darts.



that in fighting a battaile with the enemies, hee was with so much furie assaulted of them, that his men had no time to whoyle their dartes, according to the custome of the Romanes: wherefore it is sene, that to intende, that a thing that shote farre off, being in the fild, do not hurte the, there is no other remedie, then with as much celeritie as may be, to pꛑuent it. An other cause moued me to pꛑoꛑede, without shooting the ordinaunce wherof peraduenture you will laugh: yet I iudge not that it is to be dispraised. There is nothing that causeth greater confusion in an armie, then to hinder mens fights: wherby many most puissaunt armies haue bene broken, by meanes their sight hath been lettred, either with dust, or with the Sunne: yet there is nothing, that moze letteth the sighte then the smoke that the artillerie maketh in shooting: herfore, I would thinke that it were moze wisdome, to suffer the enemy to blinde himselfe, then to purpose (thou being blind) to go to find him: for this cause, either I would not shote, or (for that this should not be pꛑoued, considering the reputation that the artillerie hath) I would place it on the corners of the armie, so y<sup>t</sup> shooting, it should not with the smoke thereof, blinde the fronte of the same, whiche is the importance of my men. And to pꛑoue that it is a profitable thing, to let the sight of the enemy, there maye be brought for ensample Epaminondas, who to blind the enemies armie, whiche came to faighte with hym he caused his light horsemen, to run before the fronte of the enemies, to raise by the duste, and to lette their sight, wherby hee gotte the victorie. And where it seemeth vnto you, that I haue guided the shotte of the artillerie, after my owne deuise, making it to passe ouer the heades of my men, I answer you that most oftentimes, and without comparison, the great ordinaunce misse the footemen, muche sooner then hitte them: for that the footemen are so lowe, and those so difficult to

Nothing causeth greater confusion in an armie, then to hinder mens fights. Nothing more blinde the sight of men in an armie, then the smoke of ordinaunce.

A policie to trouble the enemies sighte.

The shot of great ordinaunce in the fild, is not much to be feared of footemen.



## The thirde Booke of

shote, that euery liue that thou raysest them, they passe  
 ouer the heades of men: and if they be leueled neuer so  
 litle to lowe, they strike in the earth, and the blow com-  
 meth not to them: also the vneuenesse of the ground sa-  
 ueth them, so; that euery litle hillocke, or high place that  
 is betwæne the men and the ordinaunce, letteth the  
 shotte therof. And cōcerning horsemen, and in especial-  
 lyc men of armes, because they oughte to stande moze  
 close together, then the light horsemen, and so; that they  
 are much higher, may the better be stroken, they may,  
 untill the artillerie haue shotte, bee kepte in the taile of  
 the armie. True it is, that the Harkebutters do muche  
 moze hurt, & the feldoe pēces, then the great ordinaunce,  
 so; the which, the greatest remedie is, to come to hande  
 strokes quickly: and if in the first assault, there be slaine  
 some, alwayes there shall bee slaine: but a good Capi-  
 tayne, and a good armie, ought not to make a coumpte  
 of hurte, that is particular, but of a generall, and to imi-  
 tate the Swizzers, whom neuer eschue to fighte, being  
 made afraied of the artillerye: but rather punishe with  
 death those, whiche so; feare therof, either should go out  
 of the ranke, or should make with his body any signe of  
 feare. I made the (so soone as they had shotte) to be reti-  
 red into the armie, y they might leaue the way free so;  
 the battaile: I made no moze mention of them, as of a  
 thing vnprofitable, the fight being begun. You haue also  
 sayde, that considering the violence of this instrument,  
 manye iudge the armours, and the aunciente orders to  
 bee to no purpose, and it seemeth by this your talke, that  
 men now adaies, haue founde orders and armours,  
 whiche are able to defende them against the artillerye:  
 if you knowe this, I woulde bee glad that you woulde  
 teach it mee: so; that hetherto, I neuer saue anye, nor  
 I beleue that there can any be founde: so that I woulde  
 vnderstande of suche men, so; what cause the Soul-  
 diours on fote in these dayes, weare the bycassplate, or  
 the

Because me  
 of armes  
 stand closer  
 together the  
 light horse-  
 men, they  
 ought to re-  
 maine be-  
 hind the  
 armie till  
 the enemies  
 ordinaunce  
 haue done  
 shooting.

the coſelet of ſtole, & they on horſebacke go all armed: becauſe ſaying that they blame the auncient arming of men as vnprofitable. conſidering the artillerie, they ought to diſpiſe alſo this? I would vnderſtande mozeouer, for what occaſion the Swiſſers, like vnto the auncient orders, make a battaile cloſe together of ſixe or eight thouſand men, & for what occaſion all other haue imitated them, this order bearing the very ſame perill, concerning the artillerie, that thoſe other ſhould beare, which ſhould imitate & antiquity. I beleue they ſhould not know what to aunſwere: but if you ſhould aſke ſuch Souldiours, as had ſome iudgement, they would anſwere firſt, that they go armed, for that though the ſame armour defende them not from the artillerie: it defendeth them from croſſebowes, from pikes, from ſwordes, from ſtaues, and from all other hurt, that cometh from the enemies, they would anſwere alſo that they went cloſe together like the Swiſſers, to be able moze eaſily to ouerthrow the footemen, to be able to withſtand better the horſe, and to geue moze difficultie to the enmie to breake them: ſo that it is ſeen, that the ſouldiers haue to feare many other thinges beſides the ordinaunce: fro which thinges, with the armours, and with the orders, they are deſcided: wherof foloweth, that the better that an armie is armed, and the cloſer that it hath the orders, and ſtronger, ſo much the ſurer it is: ſo that he that is of the ſame opinion, that you ſaie, it behooueth either that he be offſhale wiſedome, or that in this thyng, he hath ſtudied verie little: for as muche as if we ſee, that ſo little a parte of the auncient maner of armyng, whiche is vſed now a daies, that is the pike, and ſo little parte of thoſe orders, as are the maine battailes of the Swiſſers doe vs ſo muche good, and cauſe our armies to be ſo ſtrong, why ought not we to beleue, that the other armours, and thother orders whiche are leſte, be profitable? Saying that if we haue

## The thirde Booke of

no regarde to the artillerie, in putting our selues close together, as *the Swizzers*, what other orders may make vs moze to feare the same? For as much as no order can cause vs so much to feare the same, as those which bzing men together. Besides this, if the artillerie of the enemies shoulde not make me afraide, in besieging a Towne, where it hurteth me with moze safegarde, being defended of a wall, I being not able to pzeuent it, but onely with time, with my artillerie to let it, after such sort that it may double the blowe as it list, why shoulde I feare the same in the fielde, where I may quickly pzeuent it? So that I conclude thus, that the artillerie according to my opinion, doth not let, that the auncient maners can not be vsed, and to shew the auncient vertue: and if I had not talked already with you of this instrument, I woulde of the same, declare vnto you moze at length: but I wyll remit my selfe to that which then I sayde.

The artillerie is no let, why the auncient orders of warfare oughte not to be vsed in these daies.

Luigi. We may now vnderstande very well, how much you haue about the artillerie discoursed: and in conclusion, me thinkes you haue shewed, that the pzeuenting it quickly, is the greatest remedie that may be had for the same, being in the fielde, and hauing an armie against you. Upon the which there groweth in me a doubt: because me thinkes, that the enemy might place his ordinaunce in such wise in his armie, that it shoulde hurt you, and shoulde be after such sort garded of the footemen, that it coulde not be pzevented. You haue (if you remember your selfe well) in the ordering of your armie to faight, made distaunces of thre yards, betwene the one battaile and the other, making those distaunces fiftene, which is from the battailes, to the extraordinary pikes: if the enemy shoulde order his armie like vnto yours, and shoulde put the artillerie a good way within those spaces, I beleue that from thence it shoulde hurt you with their most great safegard: because  
men



men cannot enter into the force of their enemies to prevent it. Fabritio. You doubt most prudently, and I will devise with my selfe, either to resolve you the doubt, or shewe you the remedye: I haue tolde you, that continually these battailes, either through going, or through fighting, are moving, & alwayes naturallye, they come to draw harde together, so that if you make y<sup>e</sup> distaunces of a small breadth, where you set the artillerie, in a little time they be shotte vp, after such sorte, that the artillerie cannot any more shote: if you make them large, to auoid this perill, you incurre into a greater, where you through those distaunces, not onelye giue commoditie to the enemye, to take from you y<sup>e</sup> artillerie, but to breake you: but you haue to vnderstande, that it is impossible to keepe the artillerie between the bandes, and in especiall, y<sup>e</sup> those which go on carriages: For that the artillerie goeth one waye, and shoteth an other way: So that hauing to go & to shote, it is necessary, before they shote, that they tourne, and for to tourne them, they will haue so much space, that fiftie cartes of artillerie, woulde disorder anye armie: therfore, it is meete to keepe them out of the bandes, where they may be overcome in the maner, as a little afoze we haue shewed: but admit they might be kept, and that there might be founde a waye betwene both, and of such conditiō, that the p<sup>re</sup>asing together of men should not hinder the artillerie, and were not so open that it should giue way to the enemye, I say that it is remedied most easly, with making distaunces in the armie against it, which may giue free passage to the shotte of those, and so the violence thereof shall come to be vaine, the whiche may be done most easily: for as muche, as the enemye minding to haue his artillerie stand safe, it becometh that he put them behinde, in the furthest part of the distaunces, so that the shotte of the same, he purposing that they hurt not his own men, ought to passe by right line, and by that verie same alwaies:



## The thirde Booke of

A generall  
rule against  
such thinges  
as cannot be  
withstode.

waies: and therfore with giuing them place, easly, they may be auoided: for that this is a generall rule, that to those thinges, which can not be withstode, there must be giuen way, as the antiquitie made to the Cliphants, and to the carres full of hookes. I beleue, yea, I am more then certayn, that it seemeth vnto you, that I haue ordered and wonne a battaile after my owne maner: notwithstanding, I aunswere vnto you this, when so much as I haue sayde hetherto, should not suffice, that it should be impossible, that an armie thus ordered, and armed, should not ouercome at the first encounter, anye other armie that should be ordained, as they order the armies nowe adayes, whome most often times, make not but one front, hauing no Targaettes, & are in suche wise vnarmed, that they cannot defende them selues from the enemye at hande, & they order them after suche sorte, that if they set their battailes by flanke, the one to the other, they make the armie thinne: if they put the one behinde the other, hauing no waye to receyue the one the other, they do it confusedly, and apte to be easly troubled: & although they giue thre names to their armies, & deuide them into thre companies, balwarde, battaile, and rerewarde, notwithstanding it serueth to no other purpose, then to marche, and to distinguish the lodgings: but in the daie of battaile, they binde them all to the first byunte, and to the first fortune.

Luigi. I haue noted also in the fighting of your felde, howe your horsemen were repulced of the enemies horsemen: for whiche cause they retired to the extraordinary Pikes: whereby grewe, that with the side of them, they withstode, and drave the enemies backe: I beleue that the Pikes maye withstande the horses, as you saye, but in a grosse and thicke mayne battaile, as the Swizzers make: but you in your armie, haue for the heade fye ranckes of Pikes, and for the flanke seuen, so that I cannot tell howe they maye be able

able to withſtande them.

Fabritio. Yet I haue tolde you, howe ſire rankes of Pikes were occupied at ones, in the Macedonick ſtallangi, albeit you oughte to vnderſtande, that a mayne battaile of Swizzers, if it were made of a thouſande rankes, it cannot occupie moze then ſoure, or at the moſt ſiue: becauſe the pikes be ſire yardeſ and thre quarters long, one yarde and a halfe quarter, is occupied of the handes, wherefoze to the firſt rancke, there remayneth ſixe ſiue yardeſ and a halfe, and a halfe quarter of Pike: the ſeconde rancke beſides that, whiche is occupied with the hande, conſumeth a yarde and halfe a quarter in the ſpace, whiche remayneth betwene the one rancke and the other: ſo y there is not left of Pike profitable, moze then ſoure yardeſ and a halfe: to the third rancke, by this verie ſame reaſon, there remayneth thre yardeſ and a halfe: to the fourth, two yardeſ and a quarter: to the fiſte one yarde & halfe a quarter: the other rankes, ſo to hurte, be vnprofitable, but they ſerue to reſtoze theſe firſt rankes, as we haue declared, and to bee a fortification to thoſe. v. When if ſiue of their rankes can withſtande the hoſe, why can not ſiue of ours withſtande them: to the whiche alſo there lacketh not rankes be-  
hinde, that doth ſuſtayne and make them the verie ſame ſtaye, although they haue no Pikes as the other. And when the rankes of the extraoꝛdinary Pikes, whiche are placed on the ſlankeſ, ſhould ſeeme vnto you thinne, they maye bee brought into a quadrante, and put on the ſlancke nere the two battaileſ, which I ſet in the laſt company of the army: From the which place, they may eaſily altogetheꝛ ſuccour the front, and the backe of the armie, and miniſter helpe to the hoſeſ, accoꝛding as neede ſhall requiſe.

A battaile  
howe great  
ſo euer it be  
can not at  
ones occupy  
about v. ran  
kes of Pikes

Luigi. Would you alwaies uſe this forme of order, when you woulde pitche a ſielde?

Fabritio. No in no wiſe: ſo that you ought to varie the

### *The third Booke of*

the fashion of the armie, according to the qualitie of the situation, and the condition and quantitie of the enemy as before this reasoning do end, shall be shewed certayne ensamples: but this forme is giuen vnto you, not so much as most strongest of all, where in deed it is very strong, as to the intent that thereby you may take a rule, and an order to learne to knowe the wayes to order the other: for as muche as euery science hath his generalitie, vpon the which a good part of it is grounded. One thing onely I aduise you, that you neuer order an armie, after such sorte, that those that fight afore, cannot be succoured of them, which be set behinde: because he that committeth this error, maketh the greatest part of his armie to be vnprofitable, and if it encounter any strength, it can not overcome.

An aduertisement concerning the pitching of a fild.

Luigi. There is growen in mee, vpon this parte a doubt. I haue seene that in the placing of the battailes, you make the fronts of fiew on a side, the middelt of three, and the last partes of two, and I beleue, that it were better to order them contrarywise: for that I thinke, that an armie shoulde with moze difficultie be broken, when he that shoulde charge vpon it, the moze that he shoulde enter into the same, so much the stronger he shoulde finde it: and the order deuised of you, mee thinkes maketh, that the moze it is entered into, so much the weaker it is founde.

Fabritio If you should remember how to the Triarii, whome were the thirde order of the Romane Legions, there were not assigned moze then six hundred men, you woulde doubtlesse, hauing vnderstande howe they were placed in the last companye: For that you shoulde see, how I, moued of this ensample, haue placed in the last companye two battailes, whiche are nine hundred men, so that I come rather (following the ensample of the Romane people) to erre, for hauing taken to manie, then to fewe: and although this ensample



ple shoulde suffice, I wyl tell you the reason, the which is this. The first front of the armie, is made perfectly whole and thicke, because it must withstande the byunt of the enemies, and it hath not to receiue in it any of their fellows: and for this, it is fit that it be full of men: because a few men shoulde make it weake, either for thinnesse, or for lacke of sufficient number; but the seconde companie for as much as it must first receiue their friendes, to sustaine the enemy, it is mete that it haue great spaces, and for this it behoueth that it be of lesse number then the first: for that if it were of greater number, or equall, it shoulde be conuenient either not to leaue the distaunces, the which shoulde be disorder, or leauing them, to passe the boundes of those afoze, the which shoulde make the fashion of the armie vnperfect: and it is not true that you say, that the enemy the more that he entereth into the maine battaile, so much the weaker he findeth it: for that the enemy can neuer fight with the seconde order, except the first be ioyned with the same: so that he cometh to finde the middlest of the maine battaile more stronger, and not more weaker, hauing to fight with the first, and with the seconde order altogether: the very same happeneth when the enemy shoulde come to the thirde companie: for that there not with two battailes, whiche is founde freshe, but with all the maine battaile he must fight: and for that this last part hath to receiue moste men, the spaces thereof is requisite to be greatest, and that which receyue them, to be the least number.

Luigi. It pleaseth me the same that you haue tolde: but answere me also this: If the five first battailes do retire betwene the thre seconde battailes, and after the eight betwene the two thirde, it seemeth not possible, that the eight being brought together, and then the tenne together, maye be receyued when they be eight, or when they be tenne in the very same space,

D. J.

which

Howe the front of the armie ought to be made.

Howe the middle part of the armie ought to be ordered.

The ordering of the hinder parte of the armie



### *The third Booke of*

which receyued the five.

The retire of  
the Pikes,  
to place the  
Targaet me.

Fabritio. The first thing that I aunswere is, that it is not the very same space: for that 5 five haue four spaces in the middlest, which retiring betwene thre, or betwene the two, they occupie: then there remaineth the same space, that is betwene the one maine battaile and the other, and the same that is, betwene the battailes, and the extraordinary Pikes, all the whiche spaces makes largenesse: besides this, it is to be considered, that the battailes keepe other maner of spaces, when they be in the orders without being altered, then when they be altered: so that in the alteration: either they thong together, or they enlarge the orders: they enlarge them: when they feare so muche, that they fall to flying, they thrust them together, when they feare in such wise, that they seeke to saue them selues, not with running away, but with defence: so that in this case, they shoulde come to be distinguished, and not to be enlarged. Moreover, the five ranks of the Pikes, that are before, so soone as they haue begun the fight, they ought betwene their battailes to retire, into the taile of the armie, so to giue place to the Targaet men, that they maye fight: and they going into the taile of the armie, may do such seruice as the Capitayn shoulde iudge, were good to occupie them about, where in the foreward, the fight being mingled, they shoulde otherwise be altogether unprofitable. And for this 5 spaces ordained, come to be for the remnant of the men, wide enough to receyue the: yet when these spaces shoulde not suffice, the flankes on the sides be men, and not walles, whome giuing place, and enlarging them selues, may make the space to contayne so much, that it may be sufficient to receyue them.

Luigi. The ranks of the extraordinary Pikes, whiche you place on the flankes of the armie, when the first battailes retire into the second, will you haue them

them to stande still, and remaine with two heynes to the armie: *D.* will you that they also retire together, with the battailes? The which when they shoulde do, I see not how they can, having no battailes begin to be with distaunces that may receyue them.

*Fabritio.* If the enemy overcome them not, when he inforseth the battailes to retire, they may stande still in their order, and hurt the enemy on the flanke, after that the first battailes were retired: but if he should also overcome them, as seemeth reason, being so puissance, if he is able to repulse if other, they also ought to retire: which they may do excellently well, although they haue not behinde, any to receyue the: because from the midst, they may redouble by right line, entering the one ranke into the other, in the maner wherof we reasoned when it was spoken of the other of redoubling: True it is, that to minde redoubling to retire backe, it behoveth to take an other way, then the same that I shewed you: for that I tolde you, that the second ranke, ought to enter into the first, the fourth into the thirde, and so forth: in this case, they ought not to begin before, but behinde, so that redoubling the ranks, they may come to retire backward, not to tourne forward: but to aunswere to all the same, that upon this foughten fielde by mee shewed, might of you be replied, I say vnto you again, that I haue ordayned you this armie, and shewed this foughten fielde for two causes, the one for to declare vnto you how it is ordered, the other to shewe you how it is exercised: the order, I beleue you vnderstande most well: and concerning the exercise, I say vnto you, that they ought to be put together in this forme, as often times as may be: for as much as the heades learne thereby, to keepe their battailes in these orders: for if to particular souldiours, it appertayneth to keepe well the orders of every battaile, to the heades of the battailes, it appertayneth to keepe them well in every order of

Howe the pikes that are placed on the flanks of the armie ought to gouerne themselves when the rest of the armie is driuen to retire.

The exercise of the armie in generall.

### *The third Booke of*

The nōber  
that is mete  
to be vwrite  
in the An-  
signe of eue-  
rie band of  
awen.

The degrees  
of honours  
in an armie,  
which such  
a man ought  
to rise by, as  
shoulde bee  
made a ge-  
nerall Capi-  
taine.

the armie, and that they knowe howe to obey, at the  
commandement of the generall capitaine: therfore  
it is conuenient that they knowe, howe to ioyne the  
one battaile with the other, that they may knowe howe  
to take their place at once: and for this cause it is mete  
that the ansigne of euery battaile haue written in some  
eident part, the number thereof: as well for to be able  
to commaunde them, as also for that the capitaine, and  
the souldiours by the same number, may moze easlye  
knowe them againe: also the maine battailes ought to  
be nombred, and to haue the number in their principall  
ansigne: Therfore it is requisite, to knowe of what  
number the maine battaile shall be, that is placed on  
the left, or on the right hozne, of what numbers the bat-  
tailes bee, that are set in the front, and in the middest,  
and so forth of the other. The antiquitie woulde also,  
that these numbers shoulde be steppes to degrees of ho-  
nours of the armies: as for ensample, the first degré is  
the Deticaptaine, the seconde the head of fiftie ordinary  
Melitt, the thirde the Centurion, the fourth the head of  
the first battaile, the fift of the seconde, the sixt of the  
thirde, and so forth, euen to the tenth battaile, the which  
must be honoured in the seconde place, next the gene-  
rall capitaine of a maine battaile: nor anye ought to  
come to the same head, if first he haue not risen vp by al  
these degrees. And because besides these heades, there  
be three Conestables of the extraordinarye Pikes, and  
two of the extraordinarye Melitt, I woulde that they  
shoulde be in the same degré of the Constable of the  
first battaile: nor I woulde not care, that there were  
sixe men of like degré, to the entent that euery one of  
them might strine who shoulde do best, for to be promi-  
sed to be head of the second battaile. Then euery one of  
these heades, knowing in what place his battaile ought  
to be set in, of necessitie it must follow, that at a sounde  
of the Trumpet, so soone as the head standarde shall be  
erected,



created, all the armie shall be in their places: and this is the first exercise, whereunto an armie ought to be accustomed, that is, to set them quickly together: and to do this, it is requisite every day, and diuers times in one day, to set them in order, and to disorder them.

Luigi. What armes would you that the Ansignes of all the armie, should haue besides the number?

Fabritio. The standarde of the generall Capitayne ought to haue the armes of the Prince of the armie, all the other may haue the very same armes, and to varie with the fieldes, or to varie with the armes, as should seeme best to the Lorde of the armie: Because this importeth little, so that the effect grow, that they be knowen the one from the other. But let vs passe to the other exercise: the which is to make them to moue, and with a conuenient pace to marche, and to see that marching, they keepe the orders. The thirde exercise is, that they learne to handle them selues in the same maner, which they ought after to handle them selues in the day of battaile, to cause the artillerie to shote, & to be halwen out of the way, to make the extraordinary Meliti to issue out, after a likenesse of an assault, to retire them: To make that the firste battailes as though they were soe charged, retire into the spaces of the seconde, & after, all into the thirde, and from thence, every one to returne to his place: and in such wise to vse them in this exercise, that to every man, all thing may be knowen, and familiar: the which with practise, and with familiaritie, is brought to passe most quickly. The fourth exercise is, that they learne to knowe by meane of the sounde, and of the Ansigne, the commaundement of their Capitayn for as much as that, which shall be to them pronounced by voice, they without other commaundement, may vnderstande: & because the importance of this commaundement, ought to growe of the sounde. I shall tell you what soundes the antiquitie vsed, Of the Lacedemonians,

The armes that ought to be in the stand, and in the Ansignes of an armie.

The seconde & third exercise of an armie.

The fourth exercise of an armie.



## The thirde Booke of

The soundes  
of the instru-  
mentes of  
musick, that  
the antiqui-  
tie vsed in  
their armie

What is si-  
gnified by  
the sounde  
of the Trom-  
pet.

nians, according as Lucibido affirmeth, in their armies were vsed flutes: for that they indged, that this armonie, was most meete to make their armie to procede with grauetie, and with surie: the Carthaginens being moued by this very same reason, in the first assaulte, vsed the violone. Aliatte king of the Libians, vsed in the warre the violone, and the flutes: but Alexander Magnus, and the Romanes, vsed hoznes and Trumpettes, as they, that thought by vertue of suche instrumentes, to be able to incourage moze the mindes of souldiours and make them to fight the moze lustely: but as we haue in arming the armie, take of the Creeke maner, & of the Romane, so in distributing the soundes, we will keepe the customes of the one, and of the other nation: therfore, nere the generall Capitayne, I woulde make the Trompettes (to stande, as a sounde not onely apte to inflame the armie, but apte to be heard in all the whole tumulte moze then anye other sounde: all the other soundes, which should be about the Centenables, and the heades of maine battailes, I woulde that they should be small Drummes, and flutes, sounded, not as they sounde them nowe, but as they vse to sounde them at feastes. The Capitayns then with the Trompet, should shewe when they muste stande still, and go forwarde, or tourne backewarde, when the artillerie must shote, when the extraordinarye Celiti must moue and with the varietie or distinction of suche soundes, to shewe vnto the armie all those motions, whiche generally may be shewed, the which Trompettes, should be after folowed of the Drummes, and in this exercise, because it importeth much, it behooueth much to exercise the armie. Concerning the hozsemen, there woulde be vsed likewise Trompettes, but of a lesse sounde, and of a diuers voice from those of the Capitayne. This is as muche as is come into my remembraunce, aboute the order of the armie, and of the exercise of the same.

Luigi.

Luigi. I praye you let it not be græuous vnto you to declare vnto mee an other thing, that is, so; what cause you made the light ho; semen, and the extrao;dinær Tleliti, to go with cries, rumours, and furie, when they gaue the charge? And after in the incountering of the rest of the armie, you showed, that the thing followed with a most great silence: And so; that I vnderstande not the occasion of this varietie, I would desire that you woulde declare it vnto mee.

Fabritio. The opinion of auncient capitaines, hath bene diuers about the comming to handes, whether they ought with rumour to go a pace, or with silence to go faire & softly: this last waye, serueth to keepe the order more sure, and to vnderstande, better the commaundements of the Capitayn: the first, serueth to incourage more the mindes of men: and so; that I beleue, that respect ought to be had to the one, & to the other of these two things, I made the one go with rumour, and the other with silence: no; me thinks not in any wise, that the continuall rumours bee to purpose: because they let the commaundementes, the which is a thing most pernicious: no; it standeth not with reason, y the Romans vsed, except at the first assault to make rumour: so; that in their histories, is seene manye times to haue happened, that through the wordes, and comfortinges of the Capitayn, the Souldiours that ran awaye, were made to stande to it, and in sundry wise by his commaundement, to haue varied the orders, the which should not haue followed, if the rumours had bene louder then his voyce.

The cries, & rumours, vwhen vwith the first charge is giuen vnto the enemies, & the silence that ought to be vviied after, vwhen the fight is once begun.



*The fourth booke of the arte of warre,*  
*of Nicholas Machiavel, Citezen and Secretaris*  
*of Florence, vnto Laurence*  
*Philip Strozze.*  
(.2.)

Luigi.



Seeing that vnder my gouernement, a fielde hath bene won so honourablie, I suppose that it is good, that I tempt not fortune any moze, knowing how variable, and vnstable she is: and therfore, I desire to giue vp my gouernement, and that Zanobi do execute nowe this office of demanding, minding to followe the order, whiche concerneth the youngest: and I knowe he will not refuse this honour, or as we would say, this labour, as well for to do mee pleasure, as also for being naturally of moze stomacke then I: no, it shall not make him afrayed, to haue to enter into these trauailes, where he may be as well overcome, as able to conquere.

Zanobi. I am ready to do what soeuer shall please you to appointe mee, although that I desire moze willingly to heare: for as much as hetherto, your questions haue satisfied mee moze, then those shoulde haue pleased mee, whiche in harkening to your reasoning, hath chaunced to come into my remembraunce. But sir, I beleue that it is good, that you lose no time, & that you haue patience, if with these our Ceremonies wee trouble you.

Fabritio. You do mee rather pleasure, for that this variacion of demanders, maketh mee to knowe the sundrie

sundry wittes, and sundry appetites of yours: But remaineth there any thing, which seemeth vnto you good, to be ioyned to the matter, that already hath bene reasoned of?

Zanobi. Two thinges I desire, befoze you passe to an other part: the one is, to haue you to shewe, if in ordering armies, there needeth to be vsed any other fashio, the other, what respectes a Captayne ought to haue, befoze he conduct his men to the fight, and in the same any accident rising or growing, what remedie may be had.

Fabritio. I will inforce my selfe to satisfie you, I will not aunswere nowe distinctly to your questiōs: for that whilest I shall aunswere to one, many tymes it will come to passe, that I must aunswere to another. I haue tolde you, howe I haue shewed you a fashion of an army, to the intent, that according to the same, there may be giuen all those fashions, that the enemy, & the situation requireth: For as much as in this case, both according to the power therof, and according to the enemy, it proceedeth: but note this, that there is not a more perillous fashion, then to descende muche the front of the armie, if then thou haue not a most puissant, and most great host: otherwise, thou oughtest to make it rather grosse, and of small largenesse then of muche largenes, and thinne: for when thou hast fewe men in comparison to thy enemy, thou oughtest to seeke other remedies, as is to ordaine thine army in such a place, where thou maiest be fortified, either through riuers, or by means of fennes, after such sort, that thou canst not be compassed about, or to inclose thy selfe on the flankes with ditches, as Cesar did in France.

You haue to take in this case, this generall rule, to enlarge your selfe, or to drawe in your selfe with the front, according to your number, and the same of the enemy. For the enemies being of lesse number, thou oughtest to seeke large places, hauing in especiall your men

To descende muche the fronte of an armie, is most perillous.

What is best for a captain to do where his power is muche lesse then the enemies power  
A general rule.



## The fourth Booke

well instructed: to the intent thou maicst, not onelye  
 compasse about the enemye but to bestende thy orders:  
 for that in places rough and difficulte, being not able to  
 preuaile of thy orders, thou comcest not to haue anye  
 aduantage, hereby grewe, that the Romaines almoste  
 alwayes, soughte the open fieldes, and aduoyded the  
 straights. To the contrarie, as I haue said, thou ough-  
 test to do, if thou hast fewe men, or ill instructed: for that  
 then thou oughtest to seeke places, either where the li-  
 tle number maye be saued, and where the small expe-  
 rience do not hurt thee: Thou oughtest also to chuse the  
 higher grounde, to be able more easely to infeste them:  
 notwithstanding, this aduertisment ought to be had, not  
 to ordayne thy army, where the enemye maye see what  
 thou doest, and in place nere to the routes of the same,  
 where the enemies army maye come: For that in this  
 case, having respect vnto the artillerie, the higher place  
 shall get thee disaduantage: Because that alwaies and  
 commodiously, thou mightest of the enemies artillerie  
 be hurt, without being able to make any remedy, and  
 thou couldest not commodiously hurt the same, being  
 hindered by thine owne men. Also, he that prepareth an  
 armie to fight a battaile, ought to haue respect, both to  
 the Sunne, and to the Winde, that the one and the other  
 do not hurt the fronte, for that the one & the other, will  
 let thee the sight, the one with the beames, & the other  
 with the dust: and moreover, the Winde hindereth the  
 weapons, which are stroken at the enemye, and maketh  
 their blowes more feable: and concerning the Sunne,  
 it sufficeth not to haue care, that at the firste it shine  
 not in the face, but it is requisite to consider, that in-  
 creasing the daye, it hurte thee not: and for this, it  
 shoulde be requisite in ordering the men, to haue it  
 all on the backe, to the intent it shoulde haue to passe  
 muche time, to come to lye on the fronte. This waie  
 was obserued of Aniball at Canne, and of Mario a-  
 gainst

The higher  
 grounde  
 ought to be  
 chosen.

An aduerti-  
 sement not  
 to place an  
 armie, vnder  
 the enemye  
 maie see  
 what the  
 same doth.

Respectes  
 for the Sun  
 and Winde

*of the Arte of Warre. Fol. liiij*

against the Cimbrians If thou happen to be muche inferior of horses, or dayne thine army amongst vines and trex, and like impedimentes, as in our time the Spaniards did, when they ouerthrew the Frenchmen at Cirignuola. And it hath bene scene many times with all one Souldiours, varrying onely the order, and the place, that they haue become of losers victors as it happened to the Carthageners, whom hauing bene overcome of Marcus Regulus diuers times, were after by the counsell of Santippo, a Lacedemonian, victorious: whom made them to go downe into the playne, where by vertue of the horses, and of Cliphantes, they were able to overcome the Romaynes. It seemes vnto me, according to the auncient insamples, that almoste all the excellent Capitaines, when they haue knowen, that the enemye hath made strong one side of his battaile, they haue not set againste it, the moste strongest part, but the most weakest, and the other most strongest, they haue set against the most weakest: after in the beginning the fight, they haue commanded to their strongest parte, that onely they sustaine the enemye, & not to p̄cease vpon him, & to the weaker, that they suffer themselves to be overcome, & to retire into the hindermoste hands of the army. This breedeth two great disorders to the enemye: the firste, that he findeth his strongest parte compassed about, the seconde is, that seeming vnto him to haue the victorie, seldome times it happeneth, that they disorder not them selues, wherof groweth his sodain losse. Cornelius Scipio being in Spaine, against Asdrubal of Carthage, and vnderstanding howe to Asdrubal it was knowen, that he in the ordering the armye, placed his Legions in the middest, the whiche was the strongest parte of his armye, and so this how Asdrubal with like order oughte to p̄ceede: after when he came to fight the battaile, he chaunged order, and put his Legions on the hoznes of the armye,

The varyig of order and place maye cause the conquered to become victorious.

A policie in the ordering of men and pitching of a fildes.

## The fourth Booke

SV

and in the middest, placed all his weakest men: then coming to the handes, in a sodaine those men placed in the middest, he made to marche softly, and the hoznes of the army, with celeritie to make forwarde, so that onely the hoznes of both the armies fought, and the bands in the middest, though being distaunt the one from the other, ioyned not together, and thus the strongest parte of Scipio, came to fight with the weakest of Asdrubal, and ouercame him. The which waye was then profitable, but now having respect to the artillerie, it cannot be vsed: because the same space, which should remayne in the middest, betwene the one armie and the other, shoulde giue time to the same to shote: The which is most pernicious, as aboue is saide: Therfore it is requisite to lay this waye aside, and to vse, as a litle afoze we sayde, making all the army to incounter, & the weakest parte to giue place. When a capitayne perceyueth,

How to compassse aboute the enemies power.

that he hath a greater armie then his enemy, minding to compassse him about, befoze he be aware, let him order his fronte equall, to the same of his aduersaries, after, so soone as the fight is begun, let him make the fronte by a litle & litle to retire, and the flankes to bestende, and alwaies it shall happen, that the enemy shall finde him selfe, befoze he be aware compasssed about. When

How a Capitaine may fight and be as it were sure, not to be ouercom.

a Capitaine will fight, as it were sure not to be broken, let him order his army in place, where he hath refuge nere, & safe, either betwene fennes or betwene hilles, or by some strong Citie: for in this case, he cannot be followed of the enemy, where the enemy may be pursued of him: this poynte was vsed of Anibal, when fortune began to become his aduersarie, and that he doubted of the valiauntnesse of Marcello. Some to trouble the orders of the enemy, haue commaunded those that were light armed, to begin the fight, and that being begunne, to retire betwene the orders: and when the armies were after buckled together, and that the fronte

Howe to trouble the orders of the enemy.

of either



of either of them were occupied in fighting, they haue made them to issue out by the flankes of the battaile, and the same haue troubled and broken. If any perceyue himselfe to be inferiour of horse, he maye besides the wayes that are alreadye shewed, place behinde his horsemen a battaile of Pikes, and in fighting take order, that they giue waye to the Pikes, and he shall remaine alwaies superiour. Many haue accustomed to vse certayne footemen light armed, to fight among horsemen, the which hath bene to the chivalry most great helpe. Of all those, which haue prepared armies to the fielde, be moste praised Anibal and Scipio, when they fought in Affricke: and so; that Aniball had his armye made of Carthaginers, and of straungers of diuers nations, he placed in the first fronte therof. lxxx. Elephan-tes, after he placed the straungers, behinde whom he set his Carthaginers, in the hindermost place, he put the Italians, in whome he trusted litle: the whiche thing hee ordayned so, so; that the straungers hauing before them the enemye, and behinde being inclosed of his m<sup>e</sup>, coulde not flye: so that being constrained to fight they shoulde overcome, or weare the Romanes, supposing after with his fresh and valiaunt men, to be then able easely to overcome the Romanes, being wearied. Against this order, Scipio set the Astati, & Principi, & the Triarj, in the accustomed maner, to be able to receyue the one the other, and to rescue the one the other: he made the fronte of the armie, full of voide spaces, and because it shoulde not be perceyued, but rather shoulde seeme vnit- ted, he filled them full of Meliti, to whome he comma- ded, that so soone as the Elephantes came, they shoulde auoyde, and by the ordinarpe spaces, shoulde enter be- twene the Legins, and leave open the way to the Eli- phantes, and so it came to passe, that it made vaine the violence of them, so that comming to handes, he was su- perior.

what a ca-  
pitaine ou-  
ghte to doe  
when hee  
hath not so  
many horse-  
men as the  
enemie.  
A great aide  
for horseme.

The policies  
vied betwe-  
ne Aniball  
and Scipio.

Zanobi.



## *The fourth Booke of*

Zanobi. You haue made mee to remember, in al-  
ledging mee this bat'aille, howe Scipio in fighting, made  
not Aſtati to retire into the orders of the Pꝛincipi, but  
he deuided them, and made them to retire in the hoznes  
of the armye, to the intent they mighte giue place to the  
Pꝛincipi, when he woulde force foꝝwarde: therefore I  
woulde you should tell mee, what occasion moued him,  
not to obserue the accustomed order.

Fabritio. I will tell you. Anibal had put all the  
strength of his army, in the seconde bande: wherefoze  
Scipio foꝝ to set against the same like strength, gathered  
the Pꝛincipi and the Triarij together: So that the di-  
staunces of the Pꝛincipi, being occupied of the Triarij,  
there was no place to be able to receyue the Aſtati: and  
therfoze he made the Aſtati to deuide, and to go in the  
hoznes of the armye, and he dytwe them not betwæne  
the Pꝛincipi. But note, that this waye of opening the  
first bande, foꝝ to giue place to the seconde, cannot be  
vsed, but whē a man is superiour to his enemie: foꝝ that  
then there is commoditie to be able to do it, as Scipio  
was able: but being vnder, and repulced, it can not be  
done, but with thy manifest ruine: and therfoze it is co-  
uenient to haue behinde, orders that may receyue thee,  
but let vs tourne to our reasoning. The auncient Asia-  
tians, amongst other thinges deuised of them to hurt  
the enemies, vsed cartes. The which had on ʒ sides cer-  
tayne hookes, so that not onely they serued to open with  
their violence the bandes, but also to kill with the hookes  
the aduersaries: against the violence of those, in thre ma-  
ners they provided, either they sustained them with the  
thickenesse of the raies, or they receyued them betwene  
the bandes, as the Eliphantes were receyued, or els they  
made with arte some strong resistance: As Silla a Ro-  
mayne made against Archelaus, whome had manye of  
these cartes, whiche they called hooked, who foꝝ to su-  
staine them, dytwe manye stakes into the ground, be-  
hinde

Cartes full  
of hookes  
made to de-  
stroye the e-  
nemies.

The remee-  
die that was  
vsed against  
Cartes full  
of hookes.

hinde his first bandes of men, whereby the Cartes being stopped, leaue their violence. And the newe manner that Sulla vsed againſt him in ordering the armie, is to be noted: for that he put the Teleriti, & the horſe behind, and al the heaue armed afoze, leauing many diſtances to be able to ſende befoze thoſe behind, when neceſſitie required: whereby the fight being begun, with the horſemen, to the which he gaue the way, he got the victorie. To entende to trouble in the fight the enemies armie, it is conuenient to make ſomething to growe, that maye make them aſtraide, either with ſhowing of newe helpe that cometh, or with ſhowing thinges which maye repreſent a terrour vnto them: after ſuche ſort, that the enemies beguiled of that ſight, maye be aſtraide, and being made aſtraide, they maye eaſily be overcome: the which wayes Mumtio Ruſo vsed, and Accilio Glabrione, Conſuls of Rome. Caius Sulpitius alſo ſet a great many of Sackes vpon Oxes, and other beaſtes vnprofitable for the warre, but in ſuche wiſe ordained, that they ſeemed men of armes, and he commaunded, that they ſhoulde appeare vpon a Hill, while he were a fighting with the Frenchmen, whereby grew his victorie. The very ſame did Marius when he fought againſt the Dutchemen. When the fauoured aſſaultes awayling much, whileſt the fight continueth, it is conuenient that the very aſſaultes in deede do helpe much, inſpecially if at vnwares in the middeſt of the fight the enemy might be aſſaulted behind, or on the ſide: the which hardely may be done if the countrey helpe thee not: for that when it is open, part of thy men can not be hidde, as is meete to be don in like enterpriſes: but in wooddie or hillye places, and for this apte for ambuſhes, parte of thy men maye be well hidde, to be able in a ſodaine, & contrary to the enemies opinion to aſſault him, which thing alwaies ſhall be occaſion to giue thee the victorie. It hath bene ſome time

The ſtrange manner that Sulla vsed in ordering his army againſt Archelaus.

how to trouble in the fight the armie of the enemies.

A policie of Caius Sulpitius, to make his enemies aſtraied

A policie of Marius againſt the Dutchmen.

## The fourth Booke of

A policie of  
great impor-  
tance, while  
a battaile is  
a fighting.

How horse-  
men may be  
disordered.

Howe the  
turke gaue  
the Sophie  
an ouer-  
throwe.

Howe the  
Spaniards  
ouercame  
the armie of  
Amilcare.

Howe to  
traîne the e-  
mie, to his  
destruction.

A policie of  
Tullo Ho-  
stilio & Lu-  
cius Silla in  
dessembling  
of a mis-  
chaunce.

time of great importaunce, whilest the fight continueth to solue voices, which do pronounce the Capitayne of the enemies to be dead, or to haue overcome on the other side of the armie: the which many times to them that haue vsed it, hath giuen the victorie.

The chieualrye of the enemies may be easely troubled, either with sightes, or with rumours, not vsed: as Creso did, whome putte Camelles againste the hozes of the aduersaries, and Pirrus set againste the Romaine hozemen Elephantes, the sight of which troubled & disordered them. In our time, the Turke discomfited the Sopht in Persia, and the Soldane in Surria with no other, then with the noise of Harkabuses, the which in such wise, with their strange rumours, disturbed the hozes of those, that the Turke might easely overcome them: The Spaniards to overcome the armie of Amilcare, put in the first front Cartes full of Towe, drawn of oren, and comming to handes, they kindled fire to the same, wherfoze the oren to flie frō the fire, thrust into the armie of Amilcar, and opened it.

They are wonte (as we haue said) to beguile the enemy in the fight, drawing him into their ambushes, where the Countrie is commodious for the same purpose, but where it were open and large, many haue vsed to make ditches, and after haue covered them lightly with bowes and yearth, & leste certayn spaces whole to be able betwene those to retire: after, so sone as the fight hath bene begun, retiring by those, and the enemy following them, hath fallen in the pittes. If in the fight there happen thee, any accidēt that may feare thy soul-dours, it is a most prudent thing, to know how to dessemble it, and to perther it to good, as Tullo Hostilio did, and Lucius Silla: whom seing while they fought, holue a part of his men were gone to the enemies side, and how the same thing had verie much made afrayed his men, he made straight waye throughout all the armie



armie to be vnderstande, howe all thing proceeded, according to his order: the which not onely did not trouble the army, but it increased in them so much stomacke, that he remayned victorious. It happened also to Silla, that hauing sente certayne souldiours to do some busynesse, and they bring slaine he sayde, to the intent his army should not bee made afraied thereby, that he had with craft sent them into the handes of the enemies, so that he had found them nothing faithfull. Sertorius fighting a battaile in Spaine, lue one, whom signified vnto him the death of one of his Capitaynes, for feare that telling the verye same to other, he should make the afraied. It is a most difficult thing, an army being now moued to flye, to staie it, and make it to fight. And you haue to make this distinction: either that it is all moued and then to be impossible to tourne it, or there is moued a parte thereof, and then there is some remedye. Many Romane Capitaynes, with making afoze those which fled, haue caused them to staie, making them ashamed of running away, as Lucius Silla did, where already part of his Legions being tourued to flight, dyuen away by the men of Pithydates, he made afoze the with a sword in his hande crying: if any aske you, where you left your capitayne, saye, we haue left him in Boecia, where he fighteth. Attillius a consull set against those that ran away, them that ran not away, & made them to vnderstande, that if they would not tourne, they should be slaine of their friends, & of their enemies Philip of Macedo. vnderstanding how his men feared the Scythian souldiours, placed behinde his army, certayne of his most trustie hoysen, and gaue commission to them, that they should kill whom soeuer fled: wherfoze, his men minding rather to dye fighting, then flying, ouercame. Many Romaines, not so much to stay a flight, as for to giue occasion to their men, to make greater force, haue whilest they haue fought, taken

Sertorius a man for telling him of the death of one of his capitaynes.

Howe certayne capitaynes haue staied their men that hath bene runing a waye.

Attillius constrained his men that ran a waye to turne againe and to fight.

Howe Philip king of Macedonia made his men afraied to run a waye.



## *The fourth Book of the*

ken an Ansigne out of their owne mens handes, & thowen it amongst the enemies, & appointed rewardes to him that coulde get it again. I do not beleue that it is out of purpose, to ioyne to this reasoning these things which chaunce after the fight, in especially being brief things, and not to be left behinde, and to this reasoning conformable inough. Therefore I say, how the field is loste, or els wonne: when it is wone, the victorie ought with all celeritie to be followed, and in this case to imitate Caesar, and not Anibal, whome staying after that he had discomfited the Rom. at Canne, lost the empire of Rome: The other neuer rested after the victorie, but followed the enemy being broken, with greater violence and furye, then when he assaulted him whole: but when a Capitayn doth lese, hee ought to see, if of the losse there may growe any vtilitie vnto him, in especially if there remayne any residue of the army. The commoditie maye growe of the small aduertisement of the enemy, whom most often times after the victorie, becommeth negligent, and giueth thee occasion to oppresse him, as Marcius a Romayne oppressed the army of the Carthaginers, whome hauing slain the two Scipions, and broken their armye, not esteeming the same remnaunt of men, which with Marcius remained a liue, were of him assaulted and ouerthrowen: for that it is seen, that there is no thing so muche to be brought to passe, as the same which the enemy thinketh, that thou canst not attempt because for the most parte, men be hurte most, where they doubt least: therefore a Capitayn ought when hee cannot do this, to deuise at least with diligence, that the losse be lesse hurtfull: to do this, it is necessarie for thee to vse meanes, that the enemy maye not easelye followe thee, or to giue him occasion to make delaye: in the first case, some after they haue beene sure to lese, haue taken order with their heads, that in diuers parts, and by diuers wayes they shoulde flye, hauing appointed

victorie ought  
with all  
celeritie to  
be followed

what a Capitayn  
ought to do, when  
he shoulde  
chaunce to  
receaue an  
ouerthrow.

Howe Marcius  
ouer-  
came the  
armie of the  
Carthagin.

pointed where they should after assemble together: the which made, that the enemye (fearing to deuide the armye) was faine to let go safe: either all, or the greatest part of them. In the second case, many haue cast befoze the enemye, their dearest thinges, to the intent that hee tarying about the spoile, might giue them more leasure to flie. Titus Dimius vsed no smal policie to hide the losse, which he had receyued in the fighte, soz as muche as hauing fought untill night, with great losse of his men, he made in the night to be buried, the greatest parte of them, wherefoze in the morning, the enemies seeing so many slaine of theirs, and so fewe of the Romaines, beleueing that they had the disaduantage, ran awaye. I trust I haue thus confusedly, as I sayde, satisfied in good part your demaunde: in orde about the fashions of the armyes, there resteth mee to tell you, howe some time, by some Capitaynes, it hath bene vsed to make them with the fronte, like vnto a wedge, iudging to bee able by such meane, moze easely to open the enemies army. Against this fashion, they haue vsed to make a fashion like vnto a paire of spheres, to be able betwixen the same boide place, to receyue that wedge, and to compasse it about, and to fight with it on euerye side: whereupon I will that you take this generall rule, that the greatest remedie that is vsed against a deuise of the enemye, is to do willinglye the same, whiche he hath deuised that thou shalt do perforce: because that doing it willingly, thou doest it with order, and with thy aduantage, & his disaduantage, if thou shouldest doe it being inforced, it shoulde be thy vndoing: For the prouing wherof, I care not to reherse vnto you, certaine thinges already tolde. The aduersarie maketh the wedge to open thy bandes: if thou go west with them open, thou disorderest him, and he disordereth not thee. Anibal set the Elephanes in the fronte of his armye, to open with them the army of Scipio. Scipio wente with it open, and it was the

A policie of Titus Dimius. to hide a losse, vvhich receiued in a fighte.

A generall rule.

Anibal

Scipio.

## The fourth Book of the

Asdrubal.

A Capitaine  
ought not  
to fighte  
without ad-  
uantage, ex-  
cept he be  
constrained.

How aduan-  
tage may be  
taken of the  
enemies.

occasion of his victorie, and of the ruine of him. Asdrubal placed his strongest men in the midst of the front of his army, to overthrow Scipios men: Scipio commanded, that by themselves they should retire and he broke them: So that like deuises when they are foreseen, be the causes of the victorie of him, against whom they be prepared. There remaineth me also, if I remember myself well, to tell you what respectes a Capitaine ought to haue, before he leade his men to fight: vpon which I haue to tell you first, howe a capitaine oughte neuer to fight a battaile, except he haue aduantage, or be constrained. The vantage groweth of the situation, of the order of hauing more, or better men: the necessitie, groweth when thou seest how that not fighting, thou must in any wise leaue, as should be for lacking of money, and for this, thy armye to be ready all maner of wayes to resolve, where famishment is readye to assaulte thee, where the enemy looketh to be ingroled with newe men: in these cases, thou oughtest alwayes to fighte, although with thy disaduantage: for that it is much better to attempte fortune, where she maye fauour thee, then not attempting, to see thy certayne ruine: and it is as greuous a faulte in this case, in a capitaine not to fight, as to haue had occasion to overcome, and not to haue either knowen it through ignorance, or lest it through wilfulnesse. The aduantages some times the enemy giueth thee, and some times thy prudence: Many in passing Riuers, haue bene broken of their enemy, that hath bene aware thereof, whom hath taried, till the one halfe hath bene of the one side, and the other halfe on the other, and then hath assaulted them, as Cesar did to the Swizzers, where he destroyed the fourth part of them, through being halfe ouer a riuer.

Some time thy enemy is founde wearye, for hauing followed thee to vndercritelye, so that finding thy selfe freshe and lustie, thou oughtest not to let passe suche

an



an occasion: besides this, if the enemy offer unto thee in the morning betimes to fight, thou maiest a good while deferre to issue out of thy lodging, and when he hath stood long in armour, and that he hath loste that same strike heate, with the whiche he came, thou maiest then fight with him. This way Scipio and Metellus vsed in Spaine: the one against Asdrubal, the other against Sertorius. If the enemy be minished of power, either for hauing deuoided the armie, as the Scipios in Spaine, or for some other occasion, thou oughtest to prooue chaunce. The greatest part of prudent Capitaynes, rather receiue the violence of the enemies, then go with violence to assault them: for that the surfe is easie, lye with stode of sure and stedy men, & the fury bring sustayned, conuerteth lightly into violence: Thus Fabius did against the Hannites, and against the Galles, and was victorious and his fellowe Decius remayned slaine. Some fearing the power of their enemies, haue begun the fight a litle before night, to the intent y their men chauncing to be overcome, might the by the helpe of the darkenesse thereof, saue them selues. Some hauing knowen, howe the enemies army being taken of certayne superstition, not to fight in such a time, haue chosen the same time to fight, and overcome: The which Cesar obserued in France, against Ariouistus, and Vespasian in Surrie, against the Iewes.

*Furie with stode, conuerteth into violence.*

The greatest and moste impoſſaunte aduertismente, What manner of men a that a Capitayne oughte to haue, is to haue about him faithfull men, that are wise and moste experte in the warre, with whom he must continually consulte and reason of his men, & of those of the enemies, which is the greater number, whiche is best armed, or best on horsebacke, or best exercised, which be most apt to suffer necessitie, in whome he trusteth most, either in the footemen, or in the horsemen: after they ought to consider the place where they be, and whether it be more

*ner of men a capitaine ought to haue about him continually, to consult with all.*



## *The fourth Booke of the*

The conditions of the capitaine of the enemies and of those that are about him is most requisite to bee knowven. A timorous armie is not to bee conducted to fight. Howeto auoide the fighting of a fiede.

more to the purpose for the enemy, then for him: which of them hath victualles most commodious, whether it bee good to deferre the battayle, or to fight it: what good might bee geuen him, or taken awaye by tyme: for that many tymes, Shouldeours seeyng the warre to be delayed, are graued, and beeyng weerie, in the paine and in the tediousnesse thereof, wyl forsaake the. It importeth about all thing, to knowe the Capitaine of the enemies, and whom he hath about hym, whether he be rashe, or politike, whether he be fearefull, or hardie: to see howe thou mayest trust vpon the ayding Shouldeours. And aboue all thing thou oughtest to take heede, not to conduct the armie to fight when it seareth, or when in any wise it mistrusteth of the victorie: for that the greatest signe to lose, is when they beleue not to be able to winne: and therefore in this case thou oughtest to auoide the fighting of the fiede, either with doing as Fabius Maximus, whom encamping in strong places, gaue no courage to Anibal, to go to finde hym, or when thou shouldest thinke that the enemy also in strong places, woulde come to finde thee, to depart out of the fiede, & to deuide the me into the townes, to the intent that tediousnes of winning them, may weery him.

Zanobi. Can not the fighting of the battayle be otherwise auoyded, then in deuiding the armie in sunderie partes, and placing the men in Townes?

Fabritio. I beleue that once alredie, with some of you I haue reasoned, howe that he that is in the fiede, can not auoide to fight the battayle, when he hath an enemy, whiche wyl fight with him in any wyse, and he hath not but one remedie, and that is, to place hym selfe with his armie distaunt fiftie miles at least, from his aduersarie, to be able betimes to auoide him, when he shoulde go to finde hym. For Fabius Maximus neuer auoyded to fight the battayle with Anibal, but he woulde haue it with his aduantage: and Anibal

did

did not presume to be able to overcome him, going to finde him in the places where he incamped: where if he had presupposed, to haue bene able to haue overcome, it had bene convenient for Fabius, to haue fought the battailes with him, or to haue auoied.

Philip king of Macedonia, the same that was father to Perse, coming to warre with the Romaines, pitched his campe vpon a verie highe hill, to the intent not to fight with them: but the Romaines wente to finde him on the same hill, and discomfited him. Cingetorige capitaine of the frenche men, so that he woulde not fighte the field with Caesar, whome contrarie to his opinion, had passed a riuer, got a way many miles with his men. The Venecians in our time, if they woulde not haue come to haue fought with the frenche king, they ought not to haue taried till the frenche army, had passed the Riuer Addus, but to haue gotten from them as Cingetorige, where they hauing taried, knewe not howe to take in the passing of the men, the occasion to fighte the battaile, nor to auoide it: so that the frenche men being nere vnto them, as the Venecians wente out of their Campe, assaulted them, and discomfited them: so it is, that the battaile cannot be auoied, when the enemy in any wise will fight, nor let no man alledge Fabius, so that so muche in the same case, he dyd see the daye of battaile, as Amibal. It happeneth manie tymes, that thy souldiours be willing to fight, and thou knowest by the number, and by the situatiō, or so some other occasion to haue disadvantage, & desirest to make them chaunge from this desire: it happeneth also, that necessitie, or occasion, constrayneth thee to fighte, and that thy souldiours are euill to be trusted, and small ye disposed to fighte: where it is necessary in the one case, to make them afrayed, and in the other to encourage them; In the firste case, when perswasions sufficeth not, there is no better waye, then to giue in praye, a

Philip king  
of macedon.  
ouercome  
by the Ro-  
maines.

How cingē-  
torige auoi-  
ded the figh-  
ting of the  
felde with  
Caesar.  
The ignorā-  
ce of the ve-  
necians.

vvhath is to  
bee done  
vvhether soul-  
diours desire  
to fight, con-  
trarie to  
their capi-  
tains minde.

part

## *The fourth Book of the*

part of the vnto y<sup>e</sup> enemye, to the intent those that haue,  
and those that haue not fought, may beleue thee: and it  
may very well be done with art, the same which to Fa-  
bius Maximus happened by chaunce. The army of Fa-  
bius (as you knowe) desired to fighte with Anibals ar-  
my: the very same desire had the master of his horses  
to Fabius it seemed not good, to attempt the fighte: so that  
thorough suche contrarie opinions, he was faine to de-  
uide the armye: Fabius kept his men in the campe, the  
other fought, and coming into great perill, had bene  
ouerthrowen, if Fabius had not rescued him: by the  
which insample the maister of the horse, together with  
all the armye, knewe howe it was a wise waye to obey  
Fabius. Concerning to incourage the to fight, it should  
be well done, to make them to disdain the enemies,  
shewing howe they speake slanderous wordes of them,  
to declare to haue intelligence with them, and to haue  
corrupted part of them, to incampe in place, where they  
maye see the enemies, and make some light skirmish  
with them, so that the thing that is dayly seene, with  
more facilitie is despised: to shewe them to be vnwoz-  
thie, and with an oration for the purpose, to reprehende  
them of their cowardnesse, and so to make them as-  
tonied; to tell them that you will fight alone, when they  
will not beare you company. And you ought alone all  
thing to haue this aduertisment, minding to make the  
Souldiour obstinate to fighte; not to permit, that they  
may sende home any of their substance, or to leave it  
in any place, till the warre be ended, that they may vn-  
derstande, that although flying saue their life, yet it sa-  
ueth not them their goodes, the loue wherof, is wont no  
lesse then the same, to make men obstinate in defence.  
Zanobi. You haue tolde, howe the souldiours maye  
be tourned to fighte, with speaking to them: doe you  
meane by this, that all the army must be spoken vnto,  
as to the heades thereof?

Fabritio.

How to in-  
courage sol-  
diours.

An aduertis-  
ment to  
make the sol-  
diour most  
obstinately  
to fight.



Fabritio. To perswade, or to diswade a thing vnto fewe, is verry easie, for that if wordes suffice not, you maye then vse authoritie and force: but the difficultie is, to remove from a multitude an euill opinion, & that which is contrarie either to the common profite, or to thy opinion, where cannot be vsed but wordes, the whiche is inerte they be hearde of euery man, minding to perswade them all. Wherefore, it was requisite that the excellent Captaines were oratours: for that without knowing howe to speake to all the army, with difficultie maye be wrought any good thing: the whiche altogether in this our time is layed aside. Reade the life of Alexander Magnus, and you shall see how many times it was necessarie for him to perswade, and to speake publickely to his armye: otherwise he shoulde neuer haue brought them, being become ritche, and full of spoile, through the desertes of Arabia, and into India with so much his disease, and trouble: for that infinite times there growe things, whereby an armye ruinateth, when the Capitayn either knoweth not, or bleseth not to speake vnto the same, for that this speaking taketh away feare, encourageth the mindes, increaseth the obstinatenesse to fight, discovereth the deceiptes, promiseth rewardes, sheweth the perilles, and the waye to auoide them, reprehendeth, prayeth, threateneth, filleth full of hope, praise, shame, and doth all those things, by the which the humane passions are extincte, or kindeled: wherefore that Prince, or common weale, which should appointe to make a newe power, and cause reputation to their armye, ought to accustome the Souldiours thercof, to heare the Capitayn to speake, and the capitayn to know how to speake vnto them. In keepinge desposed the Souldiours in olde time, to fighte for their countrie, the religion auailed muche, and the othes whiche they gaue them, when they lead them to warfare: for as much as in all their faulces, they threatened them not onely with

It is requisite for excellent Capitaines to be good orators.

Alexander magnus vsed openly to perswade his army.

The effectuousnesse of speaking.

Souldiours ought to be accustomed to heare their Capitaine speake. How in old time souldiours were threatened for their faulces.



## The fourth Booke

Enterprises  
maie the ca-  
felier be  
brought to  
passe  
by meanes  
of religion.  
sertorius.

A policie of  
silla.

A policie of  
Charles the  
7. king of  
fraunce a-  
gainst the  
Englismen.  
How souldiours maie  
bee made to  
esteeme litle  
their enemi.

The surest  
vway to mak  
souldiours  
most obsti-  
nate to fight

By vvhhat  
meanes ob-  
stinateneſſe  
to fight is  
increased.

those punishmentes, whiche mighte bee feared of men, but with those which of God mighte bee looked for: the which thing mingled with the other Religious maners, made manye times easye to the auncient Capitaynes all enterprises, and will do allwayes, where Religion shall be feared, and obserued. Sertorius preuailed, by declaring that hee spake with a Stagge, the whiche in Goddes parte, promised him the victoꝛye.

Silla sayde, he spoke with an Image, which he had taken out of the Temple of Apollo. Many haue tolde howe God hath appeared vnto them in their sleepe, who hath admonished them to fight. In our fathers time, Charles the seuenth king of Fraunce, in the warre which he made against the Englishmen, saide, hee counsailed with a mayde, sent from God, who was called euerye where the Damosell of fraunce, the which was occasion of his victoꝛie. There maye be also vsed meanes, that may make thy men to esteeme litle the enemie, as Agesilao a Spartaine vsed, who shewed to his souldiours, certayne Persians naked, to the intent that seeing their delicate members, they should not haue cause to feare them. Some haue constrained their men to fighte thzough necessitie, taking awaye from them all hope of sauing them selues, sauing in ouercomming.

The which is the strongest, and the beste prouision that is made, to purpose to make the souldiour obstinate to fight: which obstinateneſſe is increased by the confidence and loue of the Capitayne, or of the countrie. Confidence is caused thzough the armour, the order, the late victoꝛie, and the opinon of the Capitayne. The loue of the countrie, is caused of nature that of the Capitaine, thzough vertue, moze then by anye other benefite: the necessities may be many, but that is strongest, whiche constraineth the, either to ouercome, or to die.

The

*The fiftē Booke of the Arte*  
 of warre, of Nicolas Machiauel, Citezen and Secre-  
 tarie of Florence, vnto Laurence  
 Philip Strozze.

Fabritio.



Haue shewed you , howe an  
 armye, is ordayned to fight a  
 felde with an other armye,  
 which is seen pitched against  
 it , and haue declared vnto  
 you, howe the same is over-  
 come , and after manye cir-  
 cumstances. I haue likewise  
 shewed you , what diuers  
 chaunces may happen about

the same, so that mee thinkes time to shewe you now,  
 howe an armye is ordered, against the same enemye,  
 which otherwise is not seene, but continuallye feared,  
 that hee assaulte thee : this happeneth when an armye  
 marcheth through the enemies countrie , or through  
 suspected places. Firste, you must vnderstande, how  
 a Romaine armye, sent alwaies ordinarilye afoze, cer-  
 tayne bandes of horsemen, as spies of the waye : after  
 followed the righte horne, after this , came all the car-  
 riages , whiche to the same appertayned , after this,  
 came a Legion , after it , the carriages thereof , after  
 that, an other legion , and nexte to it , their carriages,  
 after whiche , came the lefte horne, with the carriages  
 thereof at their backe, and in the laste parte , followed  
 the remnaunte of the chivalrye : this was in effecte the  
 maner, with which ordinarilye they marched : and if it  
 happened that the armye were assaulted in the way

Howe the  
 Romaines  
 marched  
 with their  
 armies.

liij.

on

## *The fift Booke of*

Howe the  
Romaines  
ordered  
their armie  
vwhen it hap  
pened to be  
assaulted on  
the vvaie.

Howe the  
maine bat  
tailes ought  
to marche.

on the fronte, or on the backe, they made streight wayes  
all the carriages to bee drawen, either on the right, or  
on the the lefte side, according as chaunced, or as they  
could beste, hauing respecte to the situation: and all the  
men together free from their impediments, made head  
on that parte, where the enemye came. If they were as  
saulted on the flankes, they drew the carriages towardes  
the same parte that was safe, and of the other, they made  
head. This waye being well and prudently governed,  
I haue thought meete to imitate, sending afoze the light  
horsemen, as explozateurs of the Countrey: Then ha  
uyng sower maine battailes, I would make them to  
marche in a raie, and every one with their carriages fol  
lowyng them. And so; that there bee two sortes of car  
riages, that is parteyning to particuler Souldiours,  
and parteyning to the publique vse of all the Campe,  
I would deuide the publique Carriages into foure  
partes, and to every maine battayle, I would appoint  
his part, deuiding also the artillerie into foure partes,  
and all the vnarmed, so that every number of armed  
men, shoulde equally haue their impedimentes. But  
because it happeneth some times, that they marche  
thzough the Countrey, not onely suspected, but so daun  
gerous, that thou fearest euery houre to be assaulted,  
thou art constrainned so; to go moze sure, to change the  
fourme of marching, and to go in suche wise prepared,  
that neither the Countrey men, nor any armie, maye  
hurt thee, findyng thee in any part vnprouided. In such  
case, the auncient Captaynes were wonte to marche  
with the armie quadzante, whiche so they called this  
so;me, not so; that it was altogether quadzant, but so;  
that it was apt to fight of foure partes, and they sayde,  
that they went prepared, both so; the waye, and so;  
the fight: from whiche waye, I wyll not digresse, and  
I wyll ordayne my two maine battayles, whiche I  
haue taken so; to make an armie of, to this effect. *Win  
ding*



ding therfore, to marche safelie through the enemies  
 Countre, and to bee able to aunswere him on euery  
 side, when at vnwares the armie might chaunce to bee  
 assaulted, and intending therfore, according to the anti-  
 quitie, to bring the same into a square, I would deuise to  
 make a quadzante, that the roome thereof shoulde be of  
 space on euery part. Clij. yardes, in this maner. Firſt  
 I would put the flankes, distant the one flanke from  
 the other. Clij. yardes, and I would place fūe battails  
 for a flanke, in a raye in length, and distant the one frō  
 the other, two yardes and a quarter: the whiche shall  
 occupie with their spaces, euery battail occupying thir-  
 tie yardes. Clij. yardes. Then betwene the heade and  
 the tayle of the se two flankes, I would place the other  
 tenne battailes, in euery parte fūe, ordering them after  
 suche sorte, that foure shoulde ioyne to the heade of the  
 righte flanke, and foure to the tayle of the left flanke,  
 leaning betwene euery one of them, a distance of thre  
 yardes: one shoulde after ioyne to the heade of the lefte  
 flanke, & one to the tayle of the right flanke: & for that  
 the space that is betwē the one flanke and the other,  
 is, Clij. yardes, and these battails which are set the one  
 to the side of the other by breadth, & not by length, will  
 come to occupie with y distance one hundred yardes &  
 a halfe yarde, there shall come betwē them foure bat-  
 tailes, placed in the fronte on the right flanke, and the  
 one placed in the same on the left, to remayne a space of  
 fiftie and eight yardes and a halfe, and the very same  
 space will come to remayne in the battailes, placed in  
 the hinder parte: nor there shall bee no difference, sa-  
 uing that the one space shall come on the parte behinde  
 towarde the right hozne, and the other shal come on the  
 part afoze, towarde the left hozne. In the space of  
 the. lviij. yardes and a halfe befoze, I would place all  
 the ordinarie Meliti, in the same behinde, the extraor-  
 dinarye, which will come to be a thousande for a space,  
 and

The ordering  
 of an armie  
 after suche  
 sorte, that it  
 maie march  
 safelie throu-  
 ghe the ene-  
 mies countre  
 & be alwayes  
 in a readi-  
 nes to fight.

The place in  
 the armie  
 where the  
 bowmen &  
 Harkabut-  
 ters are ap-  
 pointed.



## *The fift Booke of*

and minding to haue the space that ought to be within the armie, to be euery way a hundred fiftie and nine yardes, it is meete that the fise battayles which are placed in the head, and those which are placed in the tayle, occupie not any part of the space, whiche the flankes kepe: and therfore it shalbe conuenient, that the fise battayles behinde, do touche with the front, the tayle of their flankes, and those afoze, with the tayle to touche the head after such sort, that vpon euery corner of the same armie, there may remaine a space to receyue another battayle: and soz that there be foure spaces. I woulde take foure bandes of the extraordinarie Pikes, and in euery corner I woulde place one, and the two Ansignes of the fozesayde Pikes, which shall remaine ouerplus, I woulde set in the middest of the roome of this armie, in a square battayle, on the head whereof, shoulde stande the generall Captayne, with his men about him. And soz that these battayles ordeyned thus, marche all one way, but fight not all one way, in putting them together, those sides ought to be ordeyned to fight, which are not defended of thother battayles. And therfore it ought to be considered that the fise battayles that be in the front, haue all their other partes defended, except the front: and therfore these ought to be put together in good order, and with the Pikes afoze. The fise battailes which are behinde, haue all their sides defended, except the part behinde, and therfore those ought to be put together in suche wise, that the Pikes come behinde, as in the place thereof we shall shew. The fise battailes that be in the right flank, haue all their sides defended, except the right flank. The fise that be on the left flank, haue all their partes defended, except the left flank: and therfore in ordering the battayles, ther ought to be made, that the Pikes may turne on the same flank y lieth open: the Deticaptaynes to stand on the head & on the tayle, so that nothing to fight, al the  
ar,

The place  
in the army  
vwhere the  
extraordina-  
rie Pikes are  
appointed.

The place in  
the army  
vwhere the  
general cap-  
tain muste  
be.

*the Arte of Warre Folxxviii.*

armour and weapons maye be in their due places, the waye to doe this, is declared where we reasoned of the maner of ordering the battails. The artillery I would deuide, and one part I would place without, on the left flank, and the other on the right. The light horsemen I would sende afoze to discover the countrie, Of the men of armes, I would place parte behinde, on the righte hozne, and part on the left, distante about thirtie yardes from the battails: and concerning horse, you haue to take this for a general rule in euery condition, where you ordeyne an armye, that alwaies they ought to be put, either behinde, or on the flankes of the same: be that putteth them afoze, ouer against the army, it becometh him to do one of these two thinges, either that he put them so muche afoze, that being repulced, they maye haue so muche space, that maye giue them time, to be able to go a side from thy footemen, and not to run vpon them, or to order them in suche wise, with so manye spaces, that the horses by those maye enter betwene them, without disordering the. For let no man esteeme litle this remembraunce, for as muche as manye capitaynes, whome hauing taken no hede therof, haue ben ruinated, and by them selues haue bene disordered, & broken. The carriages and the vnarmed men are placed in the rowe that remaineth within the army, and in suche sorte equally deuided, that they maye giue the waye easly, to whome so euer would go either from the one corner to the other, or from the one head, to the other of the armye. These battails without the artillery and the horse, occupie euery way from the vtter side, two hundred and clemen yardes & a halfe of space: and because this quadrante is made of two maine battails, it is conuenient to distinguish, what part the one maine battaile maketh, and what the other: and for that the mayne battails are called by the number, & euery of them hath (as you knowe) tenne battails,

and

VWhere the artillery must be placed.

The light horsemen must be sent before to discover the countrie, & the men of armes to come behinde the armye. A general rule concerning horse.

vwhere the carriages & the vnarmed are placed.

## The fift Booke of

and a generall head, I would cause that the first maine battaile, should set the firste v. battailes thereof in the fronte, the other fve, in the lefte flank, and the Capitayne of the same should stande in the left corner of the front. The seconde mayne battaile, should then put the first fve battailes thereof, in the right flank, and the other fve in the taylor, and the head capitayne of the same, should stand in the right corner, whome could come to do the office of the *Tergiductor*. The armie ordered in this maner, ought to be made to move, and in the marching, to obserue all this order, and without doubt, it is sure from all the tumultes of the countrey men.

For the Capitayne ought not to make other prouision, to the tumultuarie assaults, then to giue sometime Commission to some horse, or Ansigne of *Ueluti*, that they set themselves in order: no; it shall neuer happen that these tumultuous people, will come to finde thee at the drawing of the sword, or *Pikes* pointe: so; that men out of order, haue feare of those that be in aray: & alwaies it shall be seene, that with cries and rumours, they will make a great assault, without other wise coming nere unto thee, like unto barking curres about a *Quartie*. Anibal whē he came to the hurt of the Romans into *Italie*, he passed through all *Fraunce*, and alwaies of the *Frenche* tumultes, hee tooke small regarde. Spinning to marche, it is conuenient to haue playners & labourers afoze, who may make thee & way playn, which shall be garded of those horsemen, that are sent afoze to viewe the countrey: an armie in this order may march ten mile the day, and shall haue time ynough to incampe and suppe before Sunne going downe, so; that ordinarily, an army may march twentie mile: if it happen that thou be assaulted, of an army set in order, this assaulte cannot growe sodainly: so; that an armie in order, cometh with his pace, so that thou maist haue time inough, to set thy selfe in order to fight the fiele, and

The waie  
must be  
made plaine  
where the  
armie shall  
marche in  
order.  
How many  
miles a daie  
an armie  
may  
marche in  
battaile raie  
to be able to  
incampe be-  
fore sun set.



and reduce thy men quicklſe into the ſame faſhion, or like to the ſame faſhion of an armie, which afore is ſhewed thee. For that if thou be assaulted, on the part afore, thou needest not but to cause that the artillerie that be on the ſlanckes, and the hoſe that be behinde, to come before, and place them ſelues in theſe places, and with thoſe diſtaunces as afore is declared. The thouſande Meliti that be before, muſt go out of their place, and be deuided into ſiue hundred for a part, and go into their place, betwene the hoſe and the hoznes of the armie: then in the voyde place that they ſhall leaue, the two Anſignes of the extraordinary Pikes muſt enter, which I did ſet in the middeſt of the quadzante of the armie. The thouſande Meliti, which I placed behinde, muſt depart from the ſame place, and deuide them ſelues in the ſlanckes of the battayles, to the fortification of thoſe: and by the open place that they ſhall leaue, all the carryages and vnarmed men muſt go out, and place them ſelues on the backe of the battayle. When the roome in the middeſt being voyded, and euery man gone to his place: the ſiue battayles which I placed behinde on the armie, muſt make ſorwarde in the voyde place, that is betwene the one and the other ſlancke, and marche towards the battayles that ſtande in the head, and thre of them muſt ſtand within thirtie yardes of theſe, with equall diſtaunces betwene the one and the other, and the other two ſhall remaine behinde, diſtaunt other thirtie yardes: the which faſhion may be ordayned in a ſubdaine, and commeth almoſt to be like vnto the firſt diſpoſition, whiche of the armie afore we ſhewed. And though it come ſtraighter in the front, it cometh groſſer in the ſlanckes, which geueth it no leſſe ſtrength: but becauſe the ſiue battayles that be in the taile, haue ſ Pikes on the hinder part, for the occaſion that before we haue declared, it is neceſſarie to make them to come on the parte afore, minding to haue them to make a backe

The order of  
of the army,  
when it is  
assaulted on  
the vauward.



## *The fift Booke of the*

to the front of the armie : and therefore it becometh either to make them to tourne battayle after battaile, as a whole bodie, or to make them quicklie to enter betwene the orders of targettes, and conduct them afoze the whiche waye is moze speedye, and of lesse disorder, then to make them to tourne all together : and so thou oughtest to do by all those, whiche remayne behinde in euerye condition of assaulte, as I shall shewe you. If it appeare that the enemye come on the part behinde, the first thing that ought to be done, is to cause that euerye man tourne his face, where his backe stode, & straight way the armie cometh to haue made of taile, head, and of head taile: then al those wayes ought to be kepte, in ordering the same front, as I tolde afoze. If the enemye come to incounter the right flank, the face of the army ought to be made to turne towards the same side: after, make all those things in fortification of the same head, which aboue is saide, so y<sup>e</sup> the horsemen, the Meliti, and the artillerie, may be in places conforable to the head thereof: onely you haue this difference, y<sup>e</sup> in varying the head of those which are transposed, some haue to go moze & some lesse. In dede making head of the right flank, the Meliti ought to enter in y<sup>e</sup> spaces, y<sup>e</sup> be between the horse of the army, & those horse, which were nearest to the left flank, in whose place ought to enter, the two Ansignes of y<sup>e</sup> extrao<sup>d</sup>inarie Pikes, placed in the midst: But first the carriages & the vnarmed, shal go, out by the open place, auoiding the rowe in middelt, & retiring them selues behinde the left flank, which shall come to be then the taile of the armye: the other Meliti that were placed in the tayle, according to the p<sup>r</sup>incipal ordering of the armye, in this case, shall not moue: Be. cause the same place should not remaine open, which of tayle shall come to be flank: all other thing ought to be done, as in ordering of the firste head is saide: this that is told about the making head of the right flank,

mulk

The ordering  
of the army  
vhen the ene  
mye comes  
to assaulte it  
behinde.

Howe the  
armie is or  
dered vhen  
it is assaulted  
of anie of  
the sides,

must be vnder stande to be tolde, hauing neede to make it  
of the left flank: for that the very same order oughte  
to be obserued. If the enemy should come grosse, and in  
order to assault thee on two sides, those two sides, whi-  
che he cometh to assault thee on, ought to be made  
strong with the other two sides, that are not assaulted,  
doubling the orders in eche of them, and deuiding for  
both partes the artillerie, the Meliti, and the horse. If he  
come on thee or on four sides, it is necessary that either  
thou or he lacke prudence: for that if thou shalt be wise,  
thou wilt neuer put thy selfe in place, that the enemy  
on thee or four sides, with a great number of men, and  
in order, maye assault thee: for that minding, safelye to  
hurte thee, it is requisite, that he be so great, that on  
enery side, he maye assault thee, with as many men, as  
thou hast almost in all thy army: & if thou be so vnwise,  
that thou put thy selfe in the daunger & force of an ene-  
mie, whome hath thee times more men ordayned then  
thou, if thou catche hurte, thou canst blame no man but  
thy selfe: if it happen not through thy fault, but through  
some mischaunce, the hurt shall be without the shame,  
and it shall chaunce vnto thee, as vnto the Scipions in  
Spaine, and to Asdrubal in Italie: but if the enemye  
haue not manye more men then thou, and intende for  
to disorder thee, to assaulte thee on diuers sides, it shall  
be his foolishnesse, and thy good fortune: for as muche  
as to do so, it is conueniente, that he become so thinne  
in suche wise, that then easilye thou mayest ouerthrow  
one bande, and withstande another, and in shorte time  
ruinate him: this maner of ordering an armye against  
an enemy, whiche is not scene, but whiche is feared,  
is a necessarie and a profitable thing, to accustome thy  
Souldiours, to put them selues together, and to march  
with such order, and in marching, to order them selues  
to fighte, according to the firste heade, and after to  
retourne in the same, that they marched in, then to

What is so  
be don vnto  
the armie is  
assaulted on  
two sides.

## The fift Booke of the

make heade of the taile, after, of the flankes from these to retourne into the first fashon: the whiche exercises & vses bee necessarie, minding to haue an army, thoroughly instructed and practised: in which thing the Princes and the Capitaynes, ought to take paine. For the discipline of warre is no other, then to knowe howe to commaunde, and to execute these things. For an instructed armye is no other, then an armie that is well practised in these orders: no; it cannot be possible, that who soeuer in this time, should vse like discipline shall euer be broken. And if this quadrante for me whiche I haue shewed you, is somewhat difficulte, suche difficultie is necessarie, taking it for an exercise: for as muche as knowing well, howe to set them selues in order, and to maintaine them selues in the same, they shall knowe after more easly, how to stande in those, which should not haue so muche difficultie.

Zanobi. I beleue as you saye, that these orders bee verie necessary, and I for my parte, knowe not what to adde or take from it: true it is, that I desire to knowe of you two thinges, the one, if when you will make of the tayle, or of the flank, head, and would make them to tourne, whether this be commaunded by the voyce, or with the sounde: the other, whether those that you sende afoze, to make playne the waie, for the armye to marche, oughte to bee of the verie same souldiours of your battailes, or other vile men appointed, to like exercise. Fabritio. Your first question imposeth much: for that manye times the commaundementes of Capitaynes, being not well vnderstode, or euill interpreted, haue disordered their armie: therefore the voyces with the whiche they commaunde in perilles, ought to bee cleare and nete. And if thou commaunde with the sounde, it is conuenient to make that betwene the one way and the other, there bee so much difference, that the one can not be chaunged for the other: and if thou  
com

Commaundementes of Capitaynes being not well vnderstode, maie bee the destruction of an armie. Respect that is to bee had in commaundementes made with the sound of the Tropa.



commaūdest with the voyce, thou oughtest to take heed, that thou sie the general voyces, and to vse the particulars, and of the particulars, to sie those, which may be interpreted sinitterly. Many times the saying backe, hath made to ruinate an armie: therefore this voyce ought not to be vsed, but in steade thereof to vse, retire you. If you wil make them to turne, so; to chaūge the heade, either to flank, or to backe, vse neuer to say tourne you, but saye to the left, to the right, to the backe, to the front: thus all the other voyces ought to be simple and nete, as thrust on, march, stande strong, forwarde, retourne you: and all those thinges, which may be done with the voyce, they do, the other is done with the sounde. Concerning those men, who must make the wayes plaine so; the armie to marche, whiche is your seconde question. I woulde cause my owne Souldiours to do this office; as well because in the aunciente warfare they dyd so, as also so; that there should be in the armie, lesser number of vnarmed men, and lesse impedimentes: and I woulde chose out of euery battaile, the same number that should neede, and I woulde make them to take the instrumentes, meete to playne the grounde withall, & their weapons to leaue with those ranckes, that should be nextest them, who should carrie them, and the enemye coming, they shall haue no other to doe, then to take them again, and to retourne into their aray.

In commaun-  
dementes  
made with  
the voyce,  
what re-  
spect is to be  
had.

Of Pianars.

Zanobi. Who shall carrie the instrumentes to make the waye playne withall?

Fabritio. The Cartes that are appointed to carrie the like instrumentes.

Zanobi. I doubt whether you should euer bring these our Souldiours, to labour with Shouel or Mattocke, after suche sorte.

Fabritio. All these thinges shall be reasonē in the place therof, but now I will let alone this parte, and reason of the maner of the vittualing of the armie: so; that

## *The fift Booke of the*

that me sh'inketh, haayng so meeche trauailed theim,  
it is tyme to refreſhe them, and to comfort them with  
meate. You haue to vnderſtande, that a prince oughte  
to ordaine his armie, as expedite as is poſſible, & take  
from the ſame all thoſe thynges, whiche maye cauſe a-  
ny trouble or burthen vnto it, and make vnto hym a-  
ny enterpriſe difficulte. Amongeſt thoſe thynges that  
cauſeth moſte difficultie, is to be conſtrained to keepe  
the armie prouided of wine, and baked bread. The an-  
tiquitie cared not for Wine, for that lackyng it, they  
dranke water, mingeled with a little vineger, to geue  
it a taſte: for whyche cauſe, among the munitions of  
victualles for the hoſte, vineger was one, and not wine.  
They baked not þ breade in Duens, as they uſe for Ci-  
ties, but they prouided the Meale, & of the ſame, euery  
Souldiour after his owne maner, ſatiſfied him ſelf, ha-  
uyng for condimente Larde and Baken, & which made  
the breade ſauerie, that they made, & maintained theim  
ſtrong, ſo that the prouiſion of victualles for the armie,  
was Meale, Vineger, Larde, and Bacon, & for the boi-  
les, Barley. They had ordinarie herders of greate  
beaſtes & ſmall, which ſolowed the armie, the which ha-  
uyng no nede to be carried, cauſed not moch impedi-  
ment. Of this order there grew, that an armie in olde  
time, marched ſomtimes many dayes through ſolitarie  
places, and difficulte, without ſufferyng diſeaſe of victu-  
alles: for that they liued of thynges, which eaſely they  
might conuey after them. To the contrary it happeneth  
in the armyes, that are now a dayes, whiche myndyng  
not to lacke wine, and to eat baked bread in the ſame  
maner, as when they are at home: wherof beyng not  
able to make prouiſion long, they remaine often times  
ſamiſhed, or though they be prouided, it is done wyth  
diſeaſe, and with moſte greate coſte: therfore I would  
reduce my armie to this maner of living: and I would  
not that they ſhould eate other bread, then that. which  
by

The victual-  
les that the  
antiquitie  
made proui-  
ſion of, for  
their armies

by themselves they shoulde take. Concerning wine, I would not prohibite the drinking thereof, nor yet the comming of it into the army, but I would not vse indour, nor any labour for to haue it, and in the other provisions, I would gouerne my selfe altogether, like vnto the antiquitie: the which thing, if you consider well, you shall see how much difficultie is taken away, and howe much trouble and disease, an armye and a capitayne is auoyded of, and how much commoditie shall be giuen, to what so euer enterprise is to be done.

Zanobi. We haue overcome the enemy in the fildes, marched afterwarde vpon his countrey, reason would, that spoiles be made, towncs sacked, prisoners taken, therfore I would know, howe the antiquitie in these thinges, gouerned them selues;

Fabritio. Beholde, I will satisfie you. I beleue you haue considered, for that once already with some of you I haue reasoned, howe these present warres, impouerish as well those lordes that overcome, as those that lese: for that if the one lese his estate, the other leseth his money, and his inuables: the whiche in olde time was not, for that the conquerour of the warre, waxed ritche. This groweth of keeping no compte in these dayes of the spoiles, as in olde time they dyd, but they leane it to the discretion of the souldiours. This maner maketh two most great disorders: the one, that whiche I haue tolde: the other that the souldiour becometh moze couetous to spoyle, and lesse obserueth the orders: and manye times it hath bene seene, howe the couetousnesse of the praye, hath made those to lese, whome were victorions. Therefore the Romanes whiche were Princes of armies, provided for the one and to the other, of these inconueniencs, ordaining that all the spoyle shoulde appertayne to the publicke, and that the publicke after shoulde bestowe it, as shoulde bee thought good; and there.

The occasi-  
ons why the  
vvarres ma-  
de norve a-  
daies, do im-  
pouerish the  
conquerours  
as vwell as  
the conque-  
red.  
The order  
that the Ro-  
maines toke  
concerning the  
spoile & the  
booties that  
their souldi-  
ours got.



## *The fift Booke of the*

therefoze they had in tharmie the questours, who were as we woulde say, the chamberlaynes, to whose charge all the spoyle and booties were committed: whereof the consul was serued to geue the ordinarie pay to the souldiours, to succour the wounded, and the sicke, and for the other businesse of the armie. The consull might well, and he vsed it often, to graunt a spoyle to Souldiours: but this graunting made no disorder: for that the armie beyng broken, all the pray was put in the midst, and distributed by head, according to the qualitie of euery man: the which maner they constituted, to the entent that the Souldiers should attende to ouercome, and not to robbe: & the Romaine legiōs ouercame the enemies, & followed them not, for that they neuer departed from their orders: onely there followed them, the horsemen, with those that were light armed, and if there were any other Souldiours then those of the Legions, they likewise pursued the chase. Where if the spoyle shoulde haue bene his that got it, it had not bene possible nor reasonable to haue kept the Legions steddie, & to withstande many perils: hereby grewe therefoze, that the common weale enriched, and euery Consull carryed with his triumph into the treasure, much treasure, which all was of booties & spoiles. An other thing the antiquitie did vppon good consideration, that of the wages which they gaue to euery Souldiour, the thirde parte they woulde shoulde bee layed by nexte to him, whome carryed the Ansigne of their bande, which neuer gaue it them againe before the warre was ended: this they dyd, beyng moued of two reasons, the first was to the entent that the Souldiour should thriue by his wages, because the greatest part of them being young men, and carelesse, the more they haue, so much the more without neede they spende, the other cause was, for that knowyng that their moueables were next to the Ansigne, they shoulde bee constrained to

An order  
that the an-  
tiquitie toke  
concerning  
their sould-  
diours vva-  
ges.

*the Art of Warre Fol.lxxiij*

to haue moze care therof, and with moze obstinate nesse to defende it: and this made them strong and to holde together: all which thinges is necessary to obserue, purposing to reduce the exercise of armes vnto the intier perfection therof.

Zanobi. I beleue that it is not possible, that to an armye that marcheth from place to place, there fall not perrilous accidentes, where the industrye of the Capitayne is needefull, & the worthynesse of the Souldiours, minding to auoide them. Therefore I woulde bee glad, that you remembzing any, would shewe them.

Fabritio. I shall content you with a good will, being inesppecially necessarye, intending to make of this exercise a perfecte science. The Capitaines ought aboue all other thinges, whilest they march with an army, to take heed of ambusshes, wherein they incurre daunger two wayes, either marching thou entrest into them, or thou rough craft of y<sup>e</sup> enemye thou art trained in befoze thou art aware. In the first case, minding to auoide suche perill, it is necessarye to sende afoze double warde, who may discouer the countrey, and so muche the moze diligence ought to be vsed, the moze that the countrey is apt for ambusshes. as be the woddye or hilly countries, for that alwayes they bee layde either in a wood, or behinde a hill: and as the ambussh not so sene, both ruine thee, so so seeing the same, it cannot hurt thee. Manye times byzdes or muche dust haue discouered the enemye: for that alwayes where the enemye cometh to finde thee, hee shall make great dust, which shall signifie vnto thee his comming: so often times a Capitayne seeing in the places where hee oughte to passe, Doves to rise, or other of those byzdes that flye in flockes, and to tourne aboute and not to lighte, hath knowen by the same the ambussh of the enemies to bee there, and sending befoze his men, and certaynely vnderstanding it, hath saued him selfe and hurte his enemye. Con-

Capitaines  
maie incur-  
re the daun-  
ger of am-  
busshes  
two maner  
of wayes.

Howe to  
auoide the  
perill of am-  
busshes.

Howe am-  
busshes ha-  
ue bene per-  
ceiued.

## The fift Booke of

cernyng the seconde case, to be trained in, (which these our men cal to be dꝛawen to the shot) you ought to take heede, not straight way to beleue those thinges, which are nothyng reasonable, & they be as they seeme: as shoulde be, if the enemy shoulde set afoze thẽ a pꝛape, thou oughtest to beleue that in the same is the hooke, & that therein is hid the deccipte. If many enemies bee dꝛiuen away by a fewe of thine, if a fewe enemies assaulte manye of thine, if the enemies make a sodeine flight, and not standyng with reason, alwayes thou oughtest in suche cases to feare deccipte, and oughtest neuer to beleue that the enemy knoweth not howe to do his businesse, but rather intending that he may begyle thẽ the lesse, and windyng to stand in lesse perill, the weaker that he is, & the lesse craftier that the enemy is, so much the moze thou oughtest to esteeme him: and thou oughtest in this case vse two sundrie pointes, for thou muste to feare him in thy mind and with the order, but with wordes, and with other outwarde demonstration, to seeme to despyse him: because the laste way maketh that thy souldiours hope the moze to haue the victorie: the other maketh thẽ moze warie, & lesse apte to be begyled. And thou hast to vnderstand, that when men marche thorough the enemies countrey, they are in much moze, and greater perils, then in fighting the felde: and therefore the Capitaine in marching, ought to vse double diligence: and the first thing that he ought to do, is to get described, and painted oute all the countrey, through the whiche he must marche, so that he may know the places, the number, the distances, the waies, the hilles, the riuers, the fenues, and all the qualities of them: and to cause this to be knownen, it is conuenient to haue with him diuersly, & in sundrie maners such men: as know the places, and to aske them with diligence, and to see whether their talke, agree and accoꝛdyng to the agreyng thereof, to note

Howe the capitaine of the enemies ought to be esteemed.

Where men be in greatest perill.

The description of the countrey where an army muste march, is most requisite for a Capitaine to haue.



*the Art of Warre Fo.lxxiii*

note, he oughte also to sende afoze the hoꝛsemen, & with them pꝛudente heades, not so much to discouer the ene- mie, as to beivve the countrie, to see whether it agree with the description, and with the knowldege that they haue of the same. Also the gꝛydes that are sente, ought to be kept with hope of reward, and feare of paine. And aboute all thinges it ought to be pꝛouided, that the army knowe not to what businesse hee leadeth them: soꝛ that there is nothing in the warre moꝛe pꝛofitable, then to keepe secret the thinges that is to be done: and to the in- tent a sodaine assaulte do not trouble thy souldiours, thou oughtest to see them to stand redy with their wea- pons, because the thinges that are pꝛouided soꝛ, offende lesse. Spayne soꝛ to auoyde the confusion of marching, haue placed vnder the standarde, the cariages, and the vnarmed, and haue commaunded them to folloꝛue the same, to the intente that in marching needing to stay, oꝛ to retire, they might do it moꝛe easly, whiche thing as pꝛofitable, I aloeꝛe very muche. Also in marching, ad- uertisement oughte to bee had, that the one parte of the armye go not a sunder from the other, oꝛ that thꝛoughe some going fast, and some soft, the armye become not slender: the whiche thinges, be occasion of disorder: therfoꝛe the heades must be placed in suche wise, that they maye maintayne the pace euen, causing to go soft those that go to fast, and to haste soꝛward the other that go to slow, the which pace can not be better ruled, then by the stroke of the Dꝛomme.

The wayes ought to be caused to be enlarged, so that al- wayes at least a bande of iiii. hundred men may marche in the oꝛder of the battayle. The custome and the quali- tie of the enemye oughte to be considered, and whether that he will assaulte thee, either in the moꝛning, oꝛ at none, oꝛ in the euening, & whether he be moꝛe puissant with footemen oꝛ hoꝛsemen, & accoꝛding as thou vndersta- dest to ordeyne & to pꝛouide soꝛ thy self. But let vs come

A most pro-  
fitable thing  
it is for a ca-  
pitaine to be  
secret in all  
his affaires.

An aduertif-  
ment cōcer-  
ning the  
marching of  
an armie.

The mar-  
ching of an  
armie ought  
to be ruled  
by the stro-  
ke of the  
Dꝛomme.

The condi-  
tion of the  
enemie ou-  
ght to be co-  
sidered.

## The fift Booke of

to some particular accidente. It happeneth sometyme, that thou getting from the enemy, because thou indigest thy selfe inferiour, and therefore minding not to fight with him, and he coming at thy backe, thou art cutt at the backe of a riuer, passing ouer the which, asketh time, so that the enemy is ready to ouertake thee, and to fight with thee. Some, which chauncing to be in such perill, haue inclosed their army on the hinder part with a ditch and filling the same full of Towre, and firing it, haue then passed with the army without being able to be letted of the enemy, he being by the same fire that was betwene them held backe.

Annone of  
Carthage.

Zanobi. I am harde of beliefe, that this syde coulde stay them, in especiall ye because I remeber that I haue harde, how Annone of Carthage, being besieged of enemies, inclosed him selfe on the same parte, with wodde which he did set on fire where he purposed to make eruption. Wherefore the enemies being not intentiue on the same part to looke to him, he made his army to passe ouer the same flame, causing euery man to holde his Target before his face for to defende them from the fire, and smoke. Fabritio. You saye well: but consider you howe I haue sayde, and howe Annone did: for as much as I sayde that they made a ditch, and filled it with Towre, so that he, y<sup>e</sup> would passe ouer the same, shoulde be constrained to contend with the ditch & with fire: Annone made the fire, without the ditch, and because he intended to passe ouer it, he made it not great, for that otherwise without the ditch, it shoulde haue letted him. Do you not knowe, that Nabide a Spartan being besieged in Sparta of the Romanes, set fire on parte of his Towne to let the waye to the Romanes, who already were entered in? And by meane of the same flame not onely hindered their waye, but draue them out: but let vs turne to our matter, Quintus Luttatius a Romaine, hauing at his backe the Cimbriz, and coming

Nabide a  
Spartane.

myng to a riuer, to thetente the enemye shoulde geue hym time to passe ouer, seemed to geue tyme to them to feght wyth hym: and therefore he fained that he would lodge there, & caused trenches to be made, and certayne pavilions to be erected, and sent certayne horsemen into the countrey for forredge: so that the Cimbrise beleuyng, that he incamped, they also incamped, and deuyded them selues into sundry partes, to prouyde for victuals, whereof Luttatius beyng aware, passed the riuer they beyng not able to let hym. Some for to passe a ryuer hauing no brydge, haue deuyded it, and one parte they haue turned bebynde theyr backs, & the other then becomynge shallower, wyth ease they haue passed it: whē the ryuers bee swyft, purposyng to haue theyr footemen to passe safelye, they place theyr strongest horses on the higher syde, y they may sustaine the water, & on other parte be lowe y may succour the men, yf any of y riuer in passyng shoulde be overcome wyth the water: They passe also ryuers, y bee verie deepe, with brydges, wyth botes, & wyth barrells: & therefore it is good to haue in a redynesse in an armie wherewyth to be able to make all these thynges. It fortuneth sometime that in passyng a riuer, the enemye standing agaynst the on the other banke, doeth let the: to minde to overcome this difficultie. I knowe not a better ensample to folow, then the same of Cesar, whome hauing his armie on the banke of a ryuer in fraunce, and his passage beyng letted of Mergintozige a frenche man, the whych on the other syde of the riuer had his men, marched many dayes a longe the riuer, and the lyke did the enemye: wherefore Cesar incamping in a woddie place, apte to hide men, he toke out of euery legion thre cohorts, and made them to tarye in the same place, commandyng them: that so sone as he was departed, they shoulde caste ouer a brydge, and shoulde fortifie it, and he wyth his other menne followed on the waye: wher

Quintus  
Luttatius  
policie to  
passe ouer a  
riuer.

How to pas  
se a riuer  
wythout a  
bridge.

A policie of  
Cesar to pas  
se a riuer,  
wher his  
enemye being  
on the other  
side therof  
sought to let  
him.



## The fift Booke of

foze Mergintorize ſeing the nombze of the Legions, thinking that there was not left anye parte of them behinde, ſollowed alſo his waye: but Ceſar when he ſuppoſed that the bidge was made, turned backewarde, and finding all thinges in order, paſſed the riuer without difficultie.

Howve to  
knowv the  
Foordes of  
a riuer.

Zanobi. Haue ye any rule to knowe the ſoꝝdes?

Fabritio. Yea, wee haue: alwayes the riuer, in that part, whiche is betwene the water, that is ſtilleſte, and the water that runneth ſaſteſt, there is leaſt depth, and it is a place moze meete to be looked on, then any other where. For that alwaies in the ſame place, the riuer is moſt ſhalloweſt. The which thing, becauſe it hath bene proued many times, is moſt true.

Zanobi. If it chaunce that the Riuer haue made the ſwoꝝde, ſo that the hoꝝes ſinke, what remedye haue you?

Howve to e-  
ſcape out of  
a ſtraight  
vwhere the  
ſame is beſet  
vvith ene-  
mies.

Fabritio. The remedye is to make hardels of roddes which muſt be placed in the bottome of the riuer, and ſo to paſſe vpon thoſe: but let vs followe our reaſoning. If it happē that a Capitaine be lead with his army, betwixt two hilles, & that he haue not but two wayes to ſaue him ſelfe, either y befoze, oꝝ y behinde, & thoſe being beſet of y enemies, he hath ſoꝝ remedye to do the ſame, which ſome haue done heretofore, y which haue made on their hinder part a great trench, difficulte to paſſe ouer, & ſeemed to the enemye, to minde to keepe himſelfe, ſoꝝ to be able with al his power, without needing to ſcare behinde to make ſoꝝce y way, which befoze remained open. The which the enemies beleeving, haue made them ſelues ſtrōg, towardes the open part, & haue ſoꝝ taken the incloſed, & he then caſting a bidge of wood ouer the Trench, ſoꝝ ſuch an effecte prepared, both on the ſame part, without anye impedimente hath paſſed, and alſo deliuered himſelfe out of the handes of the enemye. Lucius Minutius a Conſul of Rome, was in Liguria with an

Howve Luti-  
us Minutius  
eſcaped out  
of a ſtraight

armye

armie, and was of the enemies inclosed, betwene certaine hilles, whereby he coulde not go out: therefore he sente certaine souldiours of *Numidia* on horsebacke, which he had in his armie (whome were euill armed, and vpon little leane horses) towarde the places that were kepte of the enemies, who at the first sight made the enemies, to order them selues together, to defende the passage: but after that they sawe those men ill appointed, & accordyng to theyr faction euill horsed, regarding them little, enlarged the orders of their warde, wherof so sone as y *Numidians* were away, geuing y spurres to their horses, and runnyng violently vpon them, passed befoze they could prouide any remedy, who beyng passed, destroyed and spoiled the countrey after suche sort that they constrained the enemies, to leaue the passage free to y armie of *Lucius*. Some capitaine, whiche hath perceiued him selfe to be assaulted of a greate multitude of enemies, hath drawn together his men, & hath geuen to the enemy comoditie, to compasse him all about, and then on the same parte, which he hath perceiued to be moste weake, hath made force, & by the same waie, hath caused to make waie, and saved him selfe.

wherein he  
was inclo-  
sed of his e-  
nemies.

Howe some  
Capitaines  
haue suffred  
them selues  
to be compassed  
about of  
their ene-  
mies.

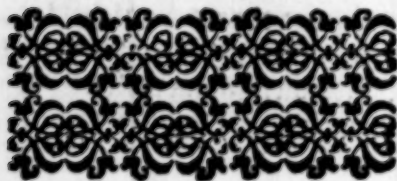
*Marcus Antonius* retiring befoze the armie of the *Parthians*, perceiued how the enemies every daye befoze Sun rising, when here moued, assaulted him, and all the the waie troubled hym, in so much, that he determined not to departe the nexte daie befoze sone: so that the *Parthians* belcuing, that he would not remoue that daie, returned to their tentes. Whereby *Marcus Antonius* might then all the reste of the daie, marche without any disquietnesse. This selfe same man for to auoide the arrowes of the *Parthians*, commaunded his men, that when the *Parthians* came towarde them, they should kneele, and that the second ranke of the battailes, should couer with their *Targaettes*, the headdes of the firste, the thirde, the seconde, the fourth,

A policie of  
*Marcus Antonius*.

A defence  
for the shot  
of arrowes.

*The fift Booke of*

fourth, the thirde, and so successiuelly, that all the armye came, to be as it were vnder a pentehouse, and defended from the shotte of the enemies. This is as muche as is come into my remembraunce, to tell you, whiche may happen vnto an armye marching: therfore, if you remember not anye thing els, I will passe to an other part.





¶ *The sixte Booke of the Arte*  
 of warre, of Nicholas Machiauel, Citezen and Secre-  
 tarie of Florence, vnto Laurence  
 Philip Strozza.

Zanobi.



Beleeue that it is good , see-  
 ing the reasoning muste be  
 chaunged, that Baptiste take  
 his office , and I to resigne  
 mine, and we shall come in  
 this case, to imitate the good  
 Capitaynes (according as I  
 haue nowe here vnderstande  
 of the gentilman) who place  
 the best shouldours , befoze

and behinde the armye , seaming vnto them necessarye  
 to haue befoze , suche as maye lustyly begin the fight,  
 and suche as behinde maye lustyly sustaine it. Nowe  
 seeing Colinus began this reasoning prudently, Bap-  
 tiste prudently shall ende it. As for Luigi and I , haue  
 in this middell intertayned it , and as euerye one of vs  
 hath take his part willingly, so I beleene not, that Bap-  
 tiste will refuse it.

Baptiste. I haue let my selfe beane gouerned hetherto  
 so I minde to do still. Wherefoze be content sir, to followe  
 your reasoning, and if we interrupt you with this prac-  
 tise of ours, haue vs excused.

Fabritio. You do mee , as all redye I haue sayde, a  
 mosse great pleasure : for this your interrupting mee,  
 taketh not awaye my fantasie , but rather refresheth  
 mee. But minding to followe our matter I saye, how  
 that it is nowe time, that we lodge this our armie, for

¶ i.

that

## *The sixt Booke of the*

that you knowe euery thing desired, rest and safety, because to rest, and not to rest safely, is no perfecte rest: I doubt muche, whether it hath not bene desired of you, that I should first haue lodged them, after made them to marche, and last of all to fighte, and wee haue done the contrary: wherunto necessity hath brought vs, soz that intending to shewe, howe an armie in going, is reduced from the forme of marching, to the same in a ner of fighting, it was necessarie to haue firste shewed, howe they ordered it to fighte. But turning to our matter, I saye, that minding to haue the campe sure, it is requisite that it be strong, and in good order: the industrie of the Capitayne, maketh it in order: the situation, or the arte, maketh it strong. The Greekes sought strong situations, noz they would neuer place them selues, where had not bene either caue, or bancke of a riuer, or multitude of trees, or other naturall fortification, that might defende them: but the Romaines not so much incaped safe through the situation, as through arte, noz they would neuer incampe in place, where they shoulde not haue ben able to haue raunged all their bandes of men according to their discipline. Whereby grewe, that the Romaines might keepe alwayes one forme of incamping, soz that they would, that the situation shoulde be ruled by them, not they by the situation: the whiche the Greekes coulde not obserue, soz that being ruled by the situation, and varying the situation and forme, it was conuenient, that also they shoulde vary the maner of incamping, and the fashion of their lodgings. Wherefore the Romaines, where the situation lacked strength they supplied the same with arte, and with industrie. And soz that I in this my declaration, haue willed to imitate the Romaines, I will not departe from the maner of their incamping, yet not obseruing altogether their order, but taking the same parte, whiche seemeth vnto mee, to be meete soz this present time. I haue told  
you

Howe the  
Greekes in-  
camped.

Howe the  
Romaines in  
camped.

you manye tymes, how the Romanes had in their con-  
 full armies, two Legions of Romaine men, whiche  
 were about aleuen thousande footemen, and sixe hun-  
 dred hoysenmen, and mozeouer they had an other aleuen  
 thousand footemen, sent from their friends in their aide:  
 nor in their armie they had neuer moze souldiours that  
 were straungers, then Romaines, except hoysenmenne,  
 whom they cared not, though they were moze in nom-  
 ber then theirs: and in all their doinges, they dyd place  
 their Legions in the middest, and the aiders, on the sides  
 the which maner, they obserued also in incamping, as  
 by your selfe you maye reade, in those authours, that  
 write of their actes: and therefore I purpose not to shew  
 you distynally how they incamped, but to tell you onelye  
 with what order. I at this present would incampe my  
 army, wherby you shal then know, what part I haue  
 taken out of the Romaine maners. You knowe, that in  
 fteede of two Romaine Legions, I haue taken two  
 mayne battailes of footemen, of sixe thousand footemen,  
 and thre hundred hoysenmen, profitable for a maine bat-  
 taile, and into what battailes, into what weapons, into  
 what names I haue deuised them: you knowe howe in  
 ordering the armie to marche, and to fighte, I haue not  
 made mention of other men, but onelye haue shewed,  
 howe that doubling the men, they needed not but to dou-  
 ble the orders: but minding at this presente, to  
 shewe you the maner of incamping, mee thinketh good  
 not to stande onely with two maine battailes, but to  
 bring together a iuste armie, made like vnto the Ro-  
 maines, of two mayne battailes, and of as manye mo-  
 ailing men: the whiche I make, to the intente that the  
 forme of the incamping, maie be the moze perfecte, by  
 lodging a perfecte armie: whiche thing in the other  
 demonstrations, hath not seemed vnto mee so necessary.  
 Purposing then, to incampe a iuste army of foure & twen-  
 tie thousande footemen, & of two thousande good hoysen-  
 men,

The maner  
 of the incam-  
 ping of an  
 armie.

U. y. men,



## *The sixt Booke of the*

men, being deuided into foure maine battailes, two of our owne men, and two of straungers. I woulde take this waye The situation being founde, where I would incampe, I would erecte the head standarde, and about it, I would marke out a quadzant, which shoulde haue euery side distant from it. xxxvj. yardes and a halfe, of whiche euery one of them shoulde lye, towarde one of the foure regions of heauen, as East, West, South, and North: betwene the which space, I woulde that the Capitaynes lodging shoulde be appointed. And because I beleue that it is wisdome, to deuide the armed from the vnarmed, seeing y<sup>e</sup> so, for the most part the Romanes did, I would therfore separate the men, that were cumbered with any thing, from the vncombered. I woulde lodge all, or the greatest parte of the armed, on the side towarde the East, and the vnarmed, and the combed, on the West side, making East the head, and West the backe of the Campe, and South, and North, shoulde be the flankes: and so, to distinguish the lodgings of the armed, I woulde take this waye. I woulde drawe a line from the head standarde, and lead it towarde the East, the space of fve hundred x. yardes and a halfe: I woulde after, make two other lines, that shoulde place in the middest the same, and shoulde be as long as that, but distaunte eche of them from it a leuen yardes and a quarter: in the ende whereof, I woulde haue the East gate, and the space that is betwene the two uttermoste lines, shoulde make a waye, that shoulde go from the gate, to the Capitaynes lodging, whiche shall come to be xxij. yards and a halfe broad, and foure hundred lxxij. yardes and a halfe long, for the xxxviij. yardes and a halfe, the lodging of the Capitayne will take vp: and this shall be called the Capitayne waye. Then there shall be made an other waye, from the South gate, to the North gate, and shall passe by the heade of the Capitayne waye, and leaue the Capitaynes lodging towarde the East, which waye

The lodgig  
for the gene  
ral capitain.

Waye shalbe ix. hundred xxxvj. yardes and a halfe long (fo: the length thereof wilbe as much as the bzeadth of all the lodgings) and shall likewise be xxij. yardes and a halfe broad, and shall be called the crosse waye. Then so soone as the Capitains lodging, were appointed out, and these two waies, there shall be begun to be appointed out, the lodgings of our owne two mayne battails one of the which, I would lodge on the right hande of the Capitaynes waye, and the other, on the left: and therefoze passing over the space, that the bzeadth of the crosse waye taketh, I would place xxxij. lodgings, on the left side of the Capitayne waye, and xxxij. on the right side, leaning betwene the xvi. and the xvij. lodging, a space of xxij. yardes and a halfe, the which shoulde serve fo: a waye ouerthwart, whiche shoulde runne ouerthwart, throughout all the lodgings of the mayne battails, as in the distributing of them shall bee seene.

Of these two orders of lodgings in the beginning of the head, whiche shall come to ioygne to the crosse waye, I would lodge the Capitayne of the men of armes, in the xv. lodgings, whiche on euerye side followeth next, their men of armes, where eche mayne battaile, hauing a hundred l. men of armes, it will come to tenne men of armes fo: a lodging. The spaces of the Capitaynes lodgings, should be in bzeadth xxx. and in length vij. yardes and a halfe. And note that when so euer I saye bzeadth, it signifieth the space of the midst from South to North, and saying length, that whiche is from West to East. Those of the men of armes, shoulde bee. xi. yardes and a quarter in length, and xxij. yardes and a halfe in bzeadth. In the other xv. lodgings, that on euerye side shoulde followe, the whiche shoulde haue their beginning on the other side of the ouerthwarte waye, and whiche shall haue the verie same space, that those of the men of armes had, I would lodge the light horsemen; whercof being a hundred

The lodgings for the men of armes, & their Capitaine.

Note, whiche is bredth & vvhich length in the square cape,

The lodgings for the light horsemen, & their capitaine.

## *The sixt Booke of the*

hundred and fiftie, it will come to tenne horsemen for a lodging, and in the xvi. that remaineth, I would lodge their Capitaine, geuing him the very same space, that is giuen to the Capitayne of the men of armes: and thus the lodgings of the horsemen of two maine battailes, will come to place in the middest the Capitayne waye, and geue rule to the lodgings of the footemen, as I shal declare. You haue noted howe I haue lodged the three hundred horsemen of euery mayne battaile with their Capitaynes, in xxxij. lodgings placed on the Capitayne waye, hauing begun from the crosse waye, and howe from the xvi. to the xvij. there remaineth a space of xxij. yardes and a halfe, to make a waye ouerthwart. Considering therfore to lodge the twentie battailes, whiche the two ordinarie maine battailes haue, I would place the lodging of euery two battailes, behinde the lodgings of the horsemen, euery one of whiche, shoulde haue in length. xi. yardes and a quarter, & in breadth. xxiij. yardes and a halfe, as those of the horsemens, and shoulde be ioyned on the hinder parte, that they shoulde touche the one the other. And in euery first lodging on euery side which commeth to lye on the crosse way, I would lodge the Constable of a battaile, which shoulde come to stand euen with the lodging of the Capitayne of the men of armes, and this lodging shall haue onelye of space for breadth xv. yardes, and for length seuen yardes and a halfe. In the other fuetene lodgings, that on euery side followeth after these, euen vnto the ouerthwarte waye, I would lodge on euery parte a battaile of footemen, whiche being foure hundred and fiftie, there will come to a lodging. xxx. the other xv. lodgings, I would place continuallie on euery side on those of the lighte horsemen, with the verie same spaces, where I would lodge on euery part, an other battaile of footemen, and in the laste lodging, I would place on euery parte the Constable of the battaile, whiche will come

The lodgings  
for the foote  
men of two  
ordinarie  
maine bat-  
tailes.

The lodgings  
for the con-  
stables.

The nūber  
of footemen  
appointed  
to euery  
lodging.



come to ioyne with the same of the Capitaine of the  
highte hoysmen, with the space of. vii. yardes & a halfe  
foz length, and .xv. foz brydeth: and so these two firste  
orders of lodgynges, shall be halfe of hoysmen, & halfe  
of foteinf. And soz that I woulde (as in the place there  
of I haue tolde you) these hoysmenne shoulde bee all  
profitable, and soz this hauing no seruantes which in  
kepping the hoyses, oz in other necessary thinges might  
helpe them, I woulde that these fote men, who lodge be  
binde the hoise, shoulde bee bounde to helpe to prouide,  
and to keepe them soz their maisters: and soz this to bee  
exempted from the other doinges of the Campe. The  
whiche maner, was obserued of the Romaines. Then  
leauing after these lodgynges on euerie parte, a space  
of. xxi. yardes and a halfe, which shoulde make a waye,  
that shoulde bee called the one, the firste waie on the  
righte hande, and on the other, the first waie on the lefte  
hand, I woulde pitche on euerie side an other order of  
xxii. double lodgynges, which shoulde tourne their bin  
der partes the one against the other with the verie same  
spaces, as those that I haue tolde you of, and deuided  
after the sixteenth in the verie same maner soz to make  
the ouerthwarthe waie, where I woulde lodge on euery  
side .iiii. battailes of fote men, with their constables  
in both endes. Then leauing on euery side an other  
space of. xxi. yardes and a halfe, that shoulde make a  
waie, whiche shoulde be called of the one side, the se  
conde waie on the right hande, and on the other syde,  
the seconde waie on the lefte hande, I woulde place an  
other order on euerie side of. xxii. double lodgynges,  
with the verie same distance and deuisions, where I  
woulde lodge on euerie side other .iiii. battailes with  
their Constables: and thus the hoysmenne and the  
bandes of the two ordinarie maine battailes, shoulde  
come to be lodged in thre orders of lodgynges, on the  
one side of the capitaine waie, and in thre other or  
ders

## *The sixt Booke of the*

ders of lodgynges on the other side of the Capitaines waye. The two aiding maine battels (for that I cause them to be made of the verie same nation) I woulde lodge them on euery parte of these two ordinarie maine battailes, with the very same orders of double lodgynges, pitchyng firste one order of lodgynges, where should lodge halfe the horsemen, and halfe the foote men, distance. xxi. yardes & a halfe from the other, for to make a way which should be called the one, the thirde waye on the right hande, and the other the thirde waie on the left hande. And after, I woulde make on euerie side, two other orders of lodgynges, in the verie same maner distinguished and ordained, as those were of the ordinarie maine battelles, whiche shall make two other wayes, and they all should be called of the numbre, & of the hande, where they should be placed: in such wyse, that all this side of the armie, should come to be lodged in. xxi. orders of double lodgynges. and in. xxi. wayes, rekenyng captaine waie, and crosse waie: I would there should remaine a space from the lodgynges to the Trench of. lxxv. yardes rounde aboute: and if you reken al these spaces, you shal see that from the midst of the Capitaines lodgyng to the easke gate, there is. D. x. yardes. Now there remaineth two spaces, whereof one is from the Capitaines lodgyng to the South gate, the other is from thence to the North gate: whiche come to bee (either of them mesurynge them from the pointe in the midst) .CCCC. lxxvi. yardes. Then takynge out of euerie one of these spaces xxxvii. yardes and a halfe, whiche the Capitaines lodgyng occupieth, and .xxviii. yardes euerie waye for a market place, and. xxi. yardes and a halfe for a way that deuides euerie one of the saied spaces in the midst, and. lxxv. yardes, that is left on euerie parte betwene the lodgynges and the Trench, there remaineth on euery side a space for lodgynges of. CCC. yardes

yarden broad, and lxxv. yarden long, measuring the length with the space that the Capitaynes lodging taketh vp. Deuiding then in the middell the sayde length, there would be made on euery bande of the Capitayne. xl. lodgings xxxvij. yarden and a halfe long, and xv. broad, which will come to be in all lxxx. lodgings, wherein shall be lodged the heades of the maine battailes, the Treasurers, the Marshalles of the fielde, and all those that should haue office in the armie, leauing some voide for straungers that should happen to come, and for those that shall serue for good will of the Capitayne. On the parte behinde the Capitaynes lodging, I would haue away from South to North. xxiij. yarden large, & should be called the head waye, whiche shall come to be placed a long by the lxxx. lodgings aforesayde: for that this waye, and the crosseway, shall come to place in the middell betwene them both the Capitaynes lodging, and the lxxx. lodgings that be on the sides therof.

From this head waye, and from ouer against the Capitaynes lodging, I would make an other waye, whiche should go from thence to the West gate, likewise broad xxiij. yarden and a halfe, and should answere in situation and in length to the Capitayne waye, and should be called the market waye. These two wayes being made, I would ordeyne the market place, where the market shall be kept, which I would place on the head of the market waye ouer against the Capitaynes lodging, and ioyned to the head waye, and I would haue it to be quadrant, and would assigne lxxx. yarden and three quarters to a square: and on the righte bande and lefte bande, of the sayd market place, I would make two orders of lodgings where euery order shall haue eighte double lodgings, whiche shall take vp in length ix. yarden, and in breadth two & twentie yarden and a halfe, so that there shall come to be on euery bande of the market place. xvi. lodgings that shall place the

The lodgings  
for the chief  
Capitaines  
of the maine  
battailes &  
for the trea-  
surers, mar-  
shals and  
straungers.



## *The sixt Booke of*

Lodginges  
for the hor-  
seme, of the  
extraordina-  
rie maine  
battailes.

The lodgings  
for the ex-  
traordinaire  
Pikes and  
Veliti.

same in the middelt which shall be in all .xxxj. wherein  
I woulde lodge those horsemen, which should remayne  
to the ayding mayne battailes: and when these should  
not suffice, I woulde assigne them: some of those lod-  
ginges that placeth betwene them the Capitaynes lod-  
ging, and in especiall ye those, that lye towarde the  
Trenche. There resteth nowe to lodge the Pikes, and  
extraordinaire Veliti, that euery mayne battayle hath,  
which you knowe according to our order, howe euery  
one hath besides the .v. battailes a thousande extraordi-  
naire Pikes, and fise C. Veliti: so that the two chiefe  
mayne battailes, haue two. M. extraordinaire Pikes,  
and a thousande extraordinary Veliti, and the ayders as  
many as those, so that yet there remaineth to be lodged  
vi. M. men, whom I woulde lodge all on the West side,  
and along the Trenche. Then from the ende of the  
head waye, towarde the North, leauing the space of lxxv.  
yardes from them to the Trenche, I woulde place an  
order of fise double lodginges, which in all should take  
vp lvi. yardes in length, and xxx. in breadth: so that the  
breadth deuided, there will come to euery lodging a lviij.  
yardes and a quarter for length, and for breadth two  
and twentie yardes and a halfe. And because there  
shall bee tenne lodginges, I will lodge thre hundred  
men, appoinding to euery lodging thirtie men: lea-  
uing then a space of thre and twentie yardes and a  
quarter, I would place in like wise, and with like spa-  
ces an other order of fise double lodginges, and agayne  
an other, till there were fise orders of fise double lod-  
ginges: which will come to be fiftie lodginges placed by  
right line on the North side, euery one of them distants  
from the Trenche. lxxv. yardes, whiche will lodge fif-  
tene hundred men. Tournig after on the lefte hande  
towarde the West gate, I would pitche in all the same  
tracte, whiche were from them to the sayde gate, fise  
other orders of double lodginges, with the verye same  
spaces

*the Arte of Warre Fo.lxxxii*

spaces, and with the verie same maner: true it is, that from the one order to the other, there shall not be more then aleuen yardes and a quarter of space: wherein shall be lodged also fiftene hundred men: and thus from the North gate to the West, as the Trench tourneth, in a hundred lodgings deuised in tenne rews of fine double lodgings in a rowe, there will bee lodged all the Pikes and extraordinary Meliti of the chiefe maine battailes. And so from the West gate to the South as the Trench tourneth even in the very same maner in other tenne rews of ten lodgings in a rewe, there shall bee lodged the Pikes, and extraordinary Meliti of the ayding mayne battailes. Their heades or their constables maye take those lodgings, that shall seme vnto them moste commodious, on the parte towardes the Trench. The artillerie, I would dispose throughout all the campe, along the bancke of the Trench: and in all the other space that shoulde remaine towardes West. I would lodge all the vnarmd, and place all the impedimentes of the Campe. And it is to be vnderstande, that vnder this name of impedimentes (as you knowe) the antiquitie mente all the same trayne, and all those thinges, which are necessarye for an army, besides the Souldiours: as are Carpenters, Smithes, Masons, Ingeners, Bombardiers, although that those mighte bee counted in the nombze of the armed, herdet men with their herdes of mottons and beanes, whiche for victualling of the armye, are requisite: and mozeouer maisters of all sciences, together with publicke cariages of the publicke munition, whiche pertayne as well to victualling, as to arming.

For I would not distinguish these lodgings particularly, only I would marke out the waies which shoulde not bee occupied of them: then the other spaces, that betwene the wayes shall remaine, whiche shall be foure, I would appointe them generallie, for all the

Howe the  
artillerie  
must be pla-  
ced in the  
Campe.

Lodgings  
for the vnar-  
med men, &  
the places  
that are ap-  
pointed for  
the impedi-  
mentes of  
the campe.

## *The sixt Booke of*

saide impedimentes that is one for the herdemmen , the other for artificers and craftes men, the thirde for publicke carriages of victuals, the fourth for the munition of armour and weapons. The wayes which I woulde should be left without occuppying them, shal be the market waye, the heade waye , and moze ouer a waye that shoulde be called the midwaye, whiche shoulde go from North to South, and shoulde passe through the middest of the market way, which from the West part, shoulde serue for the same purpose that the ouerthwart waye doth on the East part. And besides this , a waye whiche shall go about on the hinder parte , a long the lodgings of the Pikes and extraoꝝdinarie Celiti , and all these wayes shall be twø and twentie yardes and a halfe broade. And the Artillerie , I woulde place a long the Trench of the Campe, rounde about the same.

Baptiste. I confesse that I vnderstande not , nor I beleue that also to saye so, is any shame vnto mee , this being not my exercise: notwithstanding, this order pleaseth mee muche : onely I woulde that you shoulde declare mee these doubttes: The one , why you make the waye , and the spaces about so large. The other, that troubleth mee moze , is these spaces , whiche you appointe out for the lodgings , howe they ought to be vsed.

Fabritio. You must note, that I make all the waies xxij. yardes and a halfe broade , to the intente that thorowe them, maye go a battaile of men in araye, where if you remember well, I tolde you how euery bande of men, taketh in breadth betwene xxij. and rry. yardes of space to march or stande in. Nowe where the space that is betwene the Trench , and the lodgings , is lxxv. yardes broade, the same is moſte necessarye, to the intent they maye there order the battailes , and the artillerie, both to conduct by the same the pꝛayes, and to haue space to retire them selues with new trenches,  
and



and newe fortification if neede were: The lodgings also, stande better so farre from the ditches, being the more out of daunger of fires, and other thinges, which the enemye, might throwe to hurt them. Concerning the second demaunde, my intent is not that euery space of mee marked out, bee couered with a pavilion onelye, but to be vsed, as tourneth commodious to such as lodge there, either with more or with lesse Tentes, so y they go not out of the boundes of the same. And so; to mark out these lodgings, there oughte to bee moste conning men, and most excellent Architectours, whom, so soone as the Capitayne hath chosen the place, may know how to giue it the fashion, & to distribut it, distinguishing the waies, deuiding the lodgings with Coardes and staves, in suche practised wise, that straight way, they may be ordayned, and deuided: and to minde that there grow no confusion, it is conuenient to tourne the Campe, alwaies one waye, to the intent that euery man maye knowe in what waye, in what space he hath to finde his lodging: and this oughte to bee obserued in euery time, in euery place, & after such maner, that it seeme a moving Citie, the which where so euer it goeth, carrieth with it the verie same waies, the verie same habitacions, and the verie same aspectes, that it had at the first: The which thing they cannot obserue, whome seeking strong situations, must chaunge forme, according to the variation of the ground: but the Romaynes in the playne, made strong the place where they incamped with trenches, and with Rampires, because they made a space about the campe, and befoze the same a ditch, ordinarie broad foure yardes and a halfe, and deepe about two yardes and a quater, the which spaces, they increased, according as they intended to tarpe in a place and according as they feared the enemye. I for my parte at this presente, woulde not make the listes, if I intende not to Winter in a place: yet I woulde make the

The campe  
ought to be  
alwaies of  
one fashion.

## *The sixt Booke of*

the Trenches and the bancke no lesse, then the foresayd, but greater, according to necessitie. Also, considering the artillerie, I woulde intrench vpon euery corner of the Campe, a halfe circle of ground, from whence the artillerie might shanke, whome so euer should seeke to come ouer the Trenches. In this practise in knowing howe to ordayne a campe, the Souldiours ought also to be exercised, and to make with them the officers expert, that are appointed to marke it out, and the Souldiours readye to knowe their places: no: nothing therein is difficult, as in the place thereof shall be declared: wherfore I will go forward at this time to the warde of the campe, because without distribution of the watche, all the other pain that hath bene taken, should be vaine.

Baptiste. Before you passe to the watche, I desire that you woulde declare vnto me, when one woulde pitche his campe nere the enemie, what waye is vsed: so: that I knowe not, howe a man maye haue tyme, to be able to ordayne it without perill.

Fabritio. You shall vnderstande this, that no Capitayne will lye nere the enemie, except hee, that is disposed to fighte the fildes, when so euer his aduersarye will: and when a capitaine is so disposed, there is no perill, but ordinary: so: that the two partes of the armye, stand alwayes in a readinesse, to fighte the battaile, and the other maketh the lodgings. The Romaines in this case, gaue this order of fortifying the campe, vnto the Triarij: and the Principi, & the Alati, stood in armes. This they did, so: as much as the Triarij, being the last to fight, might haue time ynough, if the enemie came, to leaue the worke, and to take their weapons, and to get them into their places. Therefore, according vnto the Romaynes maner, you oughte to cause the Campe to be made of those battailes, whiche you will set in the hinder parte of the armye. in the place of the Triarij. But let vs tourne to reason of the watche.

*the Art of Warre*      *Fo. lxxxiiij*

I thinke I haue not founde, amongst the antiqui-  
 tie, that for to warde the campe in the night, they haue  
 kepte watche without the Trench, disfaunte as they  
 vse nowe a daies, whome they call Scouts: the which  
 I beleue they did: thinking that the armie might easely  
 be deceiued, though the difficultie, y is in seeing them  
 againe, for that they might be either corrupted, or op-  
 pressed of the enemye: So that to trust either in parte, or  
 altogether on them, they iudged it perillous. And there-  
 fore, al the strēgth of the watche, was within y trench,  
 whiche they did withall diligence keepe, and with moste  
 greate order punished with death, whome soeuer obser-  
 ued not the same order: the which howe it was of them  
 ordained, I will tell you now other wise, leaste I should  
 be tedious vnto you, bring able by your selfe to see it,  
 if as yet you haue not seene it: I shall onely briefly tell  
 that, which shall make for my purpose. I would cause to  
 stand ordinarily euery night, the thirde parte of the ar-  
 mie armed, & of the same, the sowerth parte alwaies on  
 soke, whome I would make to be distributed, through-  
 out all the banckes, & throughout all the places of the  
 armie, with double warde, placed in euery quadrant of  
 the same: Of which parte should stande still, part con-  
 tinually should goe from the one corner of the Campe, to  
 the other: and this order, I would obserue also in the  
 daie, when I should haue the enemye nere.

The antiqui-  
 tie vsed no  
 Scouts.

The vwatche  
 and vwarde  
 of the campe.

Concerning the geuing of the watche worde,  
 and renewing the same euery euening, and to do the o-  
 ther thinges, which in like watches is vsed, because  
 they are thinges well inough knowen, I will speake no  
 farther of them: onely I shall remember one thing,  
 for that it is of greate importaunce, and which causeth  
 great sauegarde obseruing it, and not obseruing it,  
 much harme: The which is, that there be obserued  
 greate diligence, to knowe at night, who lodgeth not  
 in the Campe, and who commeth a newe: and this is  
 an

Diligence  
 ought to be  
 vsed, to  
 knowe  
 yvhoo lieth  
 oute of the  
 Campe.



## The sixth Booke of

and vvhoe  
they be that  
cometh of  
newe.

Claudius  
Nero,

The iustice  
that ought  
to be in a  
campe.

The faultes  
that the an-  
tiquitie pu-  
nished with  
death.

an easie thing to see who lodgeth, with the same order that we haue appointed: for as much as euery lodging hauing the determined number of menne, it is an easie matter to see, if they lacke, or if there be more men: and when they come to be absente without licence, to punish them as fugitives, and if there be more, to vnderstande what they be, what they make there, and of their other condicions. This diligence maketh that þe enemy cannot but with difficultie practise with thy capitaines, and haue knowledge of thy counsailes: which thing if of þe Romaines, had not been diligently obserued, Claudius Nero could not, hauing Aniball nere him, departed from his Campe, which he had in Lucania, and to go and to retourne from Parca, without Aniball shoulde haue firste hearde thereof some thing. But it suffiseth not to make these orders good, excepte they be caused to be obserued, with a greate seueritie: for þe there is nothing that would haue more obseruacion, than is requisit in an armie: therefore the lawes for þe maintenance of the same, ought to be sharpe & harde, and þe executour thereof moste harde. The Romaines punished with death him that lacked in the watch, he that forsoke the place that was giuen him to fighte, he that caried any thing, hidde out of the Campe, if any manne should saie, that he had done some woorthy thing in the fight, and had not done it, if any had fought without the commaundement of the Capitaine, if any had for feare, caste awaie his weapons: and when it happened, that a Cohorte, or a whole Legion, had committed like fault, because they would not put to death all, they yet take all their names, and did put them in a bagge, and then by lotte, they dyne out the tenth parte, and so those were put to death: the whiche punishmente, was in suche wise made, that though enery man did not seele it, euery man notwithstanding feared it: and because where be greate punishmentes, there ought to be al-

so rewarde, minding to haue menne at one instant, to feare and to hope. they had apointed rewarde to euery woorthie acte, as he that fighting, saued the life of one of his Citezens, to him that first leapt vpon the walle of the enemies Towne, to him that entered firste into the Campe of the enemies, to him that had in fighting hurte, or slaine the enemy, he that had stroken him from his horse: and so euery vertuous acte, was of the Countsailes knowen and rewarded, and openly of euery man praised, and such as obtained giftes, for any of these things, besides the gloze and fame, whiche they got amongst the souldiours, after when they returned into their countrey, with solempne pompe, and with greate demonstration among their frendes & kinnsfolkes, they shewed them. Therefore it was no maruaile though the same people gotte so muche dominion, hauing so muche obseruation in punishmente, and rewarde towarde them, whome either for their wel doing, or for their ill doing, shoulde deserue either praise or blame: Of whiche things it were conueniente to obserue the greater parte. For I thinke not good to keepe secrete, one manner of punishmente of them obserued, whiche was, that so sone as the offendour, was before the Tribune, or Counsaile conuicted, he was of the same lightly stroken with a rodde: after the whiche striking, it was lawfull for the offendour to flie, and to al the souldiours to kill him: so that straight waie, euery man threwe at him either stones, or dartes, or with other weapons, strok him in such wise, that he wente but little waie a liue, and moste fewe escaped, and to those that so escaped, it was not lawfull for them to retourne home, but with so many incommodities, & such greate shame and ignomie, that it shoulde haue been much better for him to haue died. This maner is seene to be almoste obserued of the Swizzers, who make y condemed to be put to death openly of thother souldiours, y which

VVhere greate punishmentes be, there oughte likewise to be greate rewarde.

It was no maruel that the romains became mightie Princes.

## The sixth Booke of

A meane to  
punish and  
execute iur-  
stice, vvith-  
out raising  
tumultes.

Manlius Ca-  
pitolicus.

Souldiours  
i vvoren to  
kepe the dis-  
cipline of  
warre.

vvomen &  
idell games,  
vvere not suf-  
fered by the  
antiquitie, to  
be in their  
armies.

is well considered, and excellently done: for that intend-  
ing, that one bee not a defendour of an euill doer,  
the greatest reamedie that is founde, is to make him  
punisher of the same: because otherwise, with other re-  
specte hee fauoureth him: where when he himselfe is  
made executioner, with other desire, he desireth his pu-  
nishment, then when the execution cometh to an o-  
ther. Therefore minding, not to haue one fauoured in  
his faulte of the people, a great remedie it is, to make  
that the people, may haue him to iudge. For the greater  
prooffe of this, the insample of Manlius Capitolinus  
mighte be broughte, who being accused of the Senate,  
was defended of the people, so long as they were not  
iudge, but becoming arbitratours in his cause, they con-  
demned him to death. This is then a waye to punish,  
without raising tumultes, and to make iustice to be  
keepte: and so: as much as to bydel armed men, neither  
the feare of the lawes, nor of men suffice not, the anti-  
quitie ioyned thereunto the authoritie of God: and ther-  
fore with most great Ceremonies, they made their soul-  
diours to sweare, to keepe the discipline of warre, so that  
doing contrarie wise, they shoulde not onely haue to  
feare the Lawes, and men, but God: and they vsed all  
diligence, to fill them with Religion.

Baptiste. Dyd the Romaynes permit, that women  
mighte be in their armies, or that there mighte be vsed  
these ydle playes, which they vse nowe a daies?

Fabritio. They prohibited the one and the other,  
and this prohibition was not muche difficulte: for that  
there were so many exercises, in the whiche they kepte  
euerye daye the Souldiours, some whiles particularly  
somewhile generally occupied, that they had no time  
to thinke, either on Venus, or on playes, nor on anye o-  
ther thing, whiche sedicious & vnprofitable Souldiours  
do.

Baptiste. I am herein satisfied, but tell mee, when the  
armie



armie had to remoue, what order kept they?

Fabritio. The chiefe Trumpet sounded thre times, Order in the remouing the armie by the soundes of a trumpet at the first sounde, they tooke vp the Tentcs, and made the packes, at the seconde, they laded the carriage, at the thirde, they remoued in the same maner as oze sayde, with the impedimentes after euery part of armed men, placing the Legions in the middeste: and therefore you ought to cause after the same sorte, an extraoꝛdinarie mayne battaile to remoue: and after that, the particular impedimētes thereof, and with those, the fourth part of the publicke impedimentes, which should be all those that were lodged in one of those partes, which a litle asoꝛe wae declared: and therefore it is conuenient, to haue euery one of them, appointed to a maine battaile, to the entente that the armie remouing, euery one might knowe his place in marching: and thus euery maine battaile ought to go alwaye with their owne impedimentes, and with the fourth part of the publicke impedimentes, following after in such maner maner, as wae shewed that the Romaines marched.

Baptiste. In pitching the Campe, had they other respectes, then those you haue tolde?

Fabritio. I tell you again, that the Romaines when they incamped, woulde be able to keepe the accustomed fashon of their maner, the whiche to obserue, they had no other respecte: but concerning soꝛ other considerations, they had two principall, the one, to incampe them selues in a wholesome place, the other, to place them selues, where the enemye could not besiege them nor take from them the waye to the water, oꝛ viualcs. Then soꝛ to auoyde infirmitie, they dyd fly from places fennie, oꝛ subiecte to hurtefull windes: whiche they knewe not so well, by the qualitie of the situation, as by the face of the inhabitours: soꝛ when they sawe them euill coloured, oꝛ swollen, oꝛ full of other infection, they woulde not lodge there: concerning the other

Respects to be had for in camping.

How to choose a place to incampe.

## *The sixt Booke of*

How to a-  
uoid diseases  
from the  
armie.

The won-  
derfull com-  
moditie of  
exercise.

The proui-  
sion of vic-  
tualles that  
oughte al-  
waies to be  
in a readines  
in an armie.

respekte to prouide no: to be besieged, it is requisite to consider the nature of the place, where the friendes lye, and where the enemies, and of this to make a cōiecture, if thou maist be besieged or no: and therefore it is mēte, that the Capitaine be moste experte, in the knowledge of situations of countries, and haue aboute him diuers men, that haue the very same expertenes. They a- uoide also diseases, and famishment, with causing the armie to keepe no misrule, so: that to purpose to main- taine it in health, it is needefull to prouide, that y<sup>e</sup> souldi- ours may sleepe vnder tētes, that they may lodge where be Trees, that make shadowe, where woodde is so: to dresse their meate, that they go not in y<sup>e</sup> heate, and ther- fore they must be drawen out of the Campe, before daie in Summer, and in Winter, to take hēde, that they marche not in the Snowe, and in the Frost, withoute hāning cōmoditie to make fire, and not to lack necessa- rie apparel, no: to drinke noughtie water: those that fall sick by chaunce, make them to be cured of Phisitōs: be- cause a Capitain hath no remēdie, when he hath to fight with sicknes, and with an enemy: but nothing is so profitable, to maintaine the armie in health, as is the exercise: and therefore the antiquitie euerie daie, made them to exercise: whereby is sene howe much exercise auaileth: so: that in the Campe, it keepeth thē in health, and in the fight victorions. Concerning famishment, it is necessary to sē, that the enemy hinder thē not of thy victualles, but to prouide where thou mayst haue it, and to sē that the same whiche thou hast, be not losse: and therefore it is requisite, that thou haue al- waies in prouision with the armie, sufficiente victu- all so: a monethe, and then remouing into some strong place, thou must take order with thy nerte friendes, that daily they maye prouide so: thē, and aboue all thinges be stowe the victuall with diligence, geuing euery daie to euery manne, a reasonable measure, and obserue after

after suche sorte this pointe, that it disorder the not: be-  
cause all other thing in the warre, maye with time be  
ouercome, this onely with time ouercommeth the: no  
there shall neuer any enemye of thine, who maye ouer-  
come the with famishment, y will seeke to ouercome  
be with yron. For that though the victorie be not so ho-  
nourable, yet it is moze sure and moze certayne: Then,  
the same armye cannot auoide famishment, that is not  
an obseruer of iustice, whiche licenciouslye consumeth  
what it list: because the one disorder, maketh that the  
victualls commeth not vnto you. the other, that such vic-  
tuall as commeth, is vnprofitably consumed: therfore  
the antiquitie ordained, that they should spende the same,  
whiche they gaue, and in the same time when they ap-  
pointed: for that no Souldiour did eate, but when the  
Capitayne did eate: The which howe muche it is obser-  
ued of the armies nowe a dayes, euerye man knoweth  
and worthylye they can not be called men of good order  
and sober, as the antiquitie, but lasciuious & drunkardes.

Baptiste. You sayde in the beginning of ordering  
the Campe, that you woulde not stande onelye vpon  
two mayne battailes, but woulde take foure, for to  
shewe howe a iuste armye incamped: therfore I would  
you should tell mee two things, the one, when I should  
haue moze or lesse men, how I ought to incampe them,  
the other, what number of Souldiours shoulde suf-  
fice you to fighte againste what so euer enemye that  
were.

Fabritio. To the first question I aunswere you, that  
if the armye be moze or lesse, then foure or fife thou-  
sande Souldiours, the orders of lodgings, maye be  
taken a waye or ioyned, so manye as suffiseth: and with  
this waye a man may go in moze, and in lesse, into in-  
finite: Notwithstanding the Romaynes, when  
they ioyned together two consull armies, they made  
two campes, and they tourned the partes of the vnar-  
med

Howe to lod-  
ge in the cap-  
more or les-  
se men, then  
the ordinary



## The sixt Booke of

med, the one againſte the other. Concerning the ſecond queſtion, I ſay vnto you, that the Romaines ordinary armie, was about *xxij. M. ſouldiours*: but when they were driven to fight againſte the greateſt power y might be, the moſt that they put together, were. *l. M.* With this number, they did ſet againſte two hundred thouſand Frenchmen, whome assaulted them after the firſt warre, that they had with the Carthageners. With this verge ſame number, they foughte againſte Anniball. And you muſt note, that the Romaines, and the Greekes, haue made warre with ſewe, ſoft, ſying them ſelues through order, and throughe arte: the Weſt, and the eaſt, haue made it with multitude: But the one of theſe nations, doth ſerue with naturall furie, as do the men of the Weſt partes, the other throughe the greate obedience which thoſe men haue to their king. But in Grece, and in Italy, being no naturall fury, nor the naturall reuerſe towardeſ their king, it hath bene neceſſary for them to learne the diſcipline of warre, y which is of ſo much force, that it hath made that a ſewe, hath bene able to ouercome the furie, and the naturall obſtinatenesse of manie. Wherefore I ſaye, that minding to imitate the Romaines, and the Grekes, the number of *l. M. ſouldiours*, ought not to be paſſed, but rather to take leſſe: becauſe manie make conſuſion, nor ſuffer not the diſcipline to be obſerued, and the orders learned, and Pirrus vſed to ſaye, that with *xv. thouſand* men he woulde aſſaile the worlde: but let vs paſſe to another parte. We haue made this our armie to winne a field and ſhewed the frauailes, that in the ſame fight may happen: we haue it made to march, & declared of what impedimentes in marching it maye be diſturbed: and finally we haue lodged it: where not onely it ought to take a littell reſte of the labours paſſed, but alſo to thinck howe the warre ought to be ended: for that in the lodgings, is handled many thinges, inſpecially the

The number  
of men that  
an armye  
ought to be  
made of, to  
be able to  
fighte with  
the puiſſant  
eſte enemye  
that is.

Pirrus.

*the Arte of Warre Fo.lxxxviii*

thy enemies as yet remayning in the fiede, and in suspected Townes. of whome it is good to be assured, and those that be enemies to ouercome them: therefore it is necessarie to come to this demonstration, and to passe this difficultie with the same glozie, as hitherto we haue warred. Therefore comming to particuler matters, I saye that if it should happen, that thou wouldest haue many men, or many people to doe a thing, which were to thee profitable, and to them greate hurte, as shoulde be to breake downe the wall of their citie, or to sende into exile many of them, it is necessarie for thee, either to beguile them in suche wise that euery one beleue not that it toucheth him: so that succouring not the one the other they maye finde them selues all to be oppressed without remedie, or els vnto all to commaunde the same, which they oughte to do in one selfe daye, to the intente that euery man beleuing to be alone, to whome the commaundement is made, maye thinke to obeie and not to remedie it: and so without tumulte thy commaundement to be of euery man executed. If thou shouldest suspecte the fidelitie of anie people, & wouldest assure thee, and ouercome them at vnwares, for to colour thy intente moze easely, thou canst not do better, then to counsell with them of some purpose of thine, desiring their aide, and to seeme to intend to make an other enterpryse, and to haue thy minde farre from thinking on them: the which will make, that they shall not thinke on their owne defence, beleuing not that thou purposelt to hurte them, and they shall geue thee commoditie, to be able easely to satisfie thy desire. When thou shouldest perceiue, that there were in thine armie some, that vsed to aduertise thy enemy of thy deuises, thou canst not do better, minding to take commoditie by their traiterous mindes, then to commen with them of those thinges, that thou wilt not do, and those that thou wilt do, to kepe secrete, and to saye

Howe to  
cause me to  
do such a  
thing as shold  
be profitable  
for thee  
& hurtfull,  
to them sel-  
ues.

Howe to o-  
uercome me  
at vnwares.

Howe to tur-  
ne to commo-  
ditie the de-  
uises of such  
as vse to ad-  
uertise thy  
enemy of  
thy procea-  
dings.

to

## The sixth Booke of

to doubt of things, that thou doubtst not, and those of which thou doubtst, to hide: the which shall make the enemy to take some enterprise in hande, believing to knowe thy deuises, whereby easily thou mayest be gyle and oppress him. If thou shouldst intende (as Claudius Nero did) to diminish thy armye, sending helpe to some friende, and that the enemy should be aware thereof, it is necessary not to diminish the lodgings, but to maintaine the signes, & the orders whole, making the very same fires, and the very same wards throughout all the campe, as were wont to be afore. Likewise if with thy armye there should ioyne new men, and wouldest that the enemy should not knowe that thou werest ingrossed, it is necessary not to increase the lodgings: Because keeping secreete doings and deuises, hath alwaies bene most profitable.

A saying of Metellus

Marcus Crassus.

How to vnderstande the secretes of thy enemye.

A policie of Marius, to vnderstande howe he might trust the Frenchmen.

Metellus being with an armye in Hispaignie, to one, who asked him what he woulde doe the next daye, answered, that if his sherte knew thereof, he woulde bourn it. Marcus Crassus, vnto one, whome asked him, when the armye should remoue, sayde believingst thou to be alone not to here the trumpet? If thou shouldst desire to vnderstande the secretes of thy enemye, and to know his orders, some haue vsed to sende ambassadours, and with them in seruantes apparel, moste expertest men in warre: whom hauing taken occasion to see the enemies armye, and to consider his strength and weakenesse, it hath geuen them opportunitie to overcome him. Some haue sent into exile one of their familiars, & by meanes of the same, hath knowen the deuises of his aduersarye. Also like secretes are vnderstode of the enemies when for this effecte there were taken any prisoners. Marius which in the warre that he made with the Cimbric, for to knowe the sayeth of those Frenchmen, who then inhabited Lombardie, and were in leage with the Romaine people, sent them letters open, and sealed



sealed: and in the open he wrote, that they should not open the sealed, but at a certaine time, and before the same time demanding them againe, and finding them opened, knewe thereby that they: faith was not to be trusted. Some Capitaines, being inuaded, haue not desired to go to meete the enemy, but haue gone to assaulte his countrey, and constrained him to returne to defende his owne home: The whiche many times hath come well to passe, for that those souldiours beginning to fill them selues with booties, and confidence to overcome, shall some make the enemies souldiours to waxe afraide, when they supposing them selues conquerours, shall vnderstande to become losers: So that to him that hath made this diuersion, manye times it hath proued well. But onely it may be done by him, which hath his countrey stronger then that of the enemyes, because when it were otherwise, he should be go to losse. It hath bene often a profitable thing to a Capitayne, that hath bene besieged in his lodgings by the enemye, to mone an intreatie of agreemente, and to make truse with him for certaine dayes: the whiche is wonte to make the enemies more negligente in all doinges: so that auayling thee of their negligence, thou mayst easely haue occacion to gette thee out of theyr handes. But this waye Silla deliuered him selfe twice from the enemies and with the verie same deceipte, Asdruball in Hispanie gotte oute of the force of Claudious Nero, who had besieged him. It helpeth also to deliuer a man oute of the daunger of the enemye, to doe some thing be, And the foresayde, that maye keepe him at a baye: this is done in two maners, either to assaulte him with parte of thy power, so that he being attentive to the same sighte, maye geue commoditie to the reste of thy men to be able to saue them selues, or to cause to rise some newe accidente, which for the straungenesse of the thing, maye make him to maruell, and for this occacion to

What some Capitaines haue done when their countrey hath bene inuaded of enemyes.

To make the enemye negligente in his doinges.

Silla.

Asdrubal.

## *The sixt Booke of*

The policie  
of Aniball,  
vvhetherby he  
escaped out  
of the dan-  
ger of Fabi-  
us Maximus  
A capitaine  
must deuise  
hovv to de-  
uide the for-  
ce of his e-  
nemies.

Hovve to  
cause the e-  
nemie to ha-  
ue in suspect  
his most tru-  
sty men.

Anibal.

Coriolanus.

Mettellus a-  
gainste Ju-  
gurte.

A practise of  
the Remyne  
orators,  
to bring A-  
nibal out of  
credit vvith  
Antiochus.  
Hovv to cau-  
se the ene-  
mie to deu-  
ide his pov-  
er.

stande doubtfull, and still: as you knowe howe Anni-  
ball dyd, who being inclosed of Fabius Maximus, ti-  
ed in the nighte small Bauens kindeled betwene the  
hoyes of manie Dren, so that Fabius astonied at  
the strangeness of the same sighte, thoughte not to let  
him at all the passage. A Capitayne oughte among  
all other of his affaires, with all subtiltie to deuise to  
deuide the force of the enemye, eyther with making  
him to suspecte his owne menne, in whome he trust-  
eth, or to geue him occasion, that he maye seprate  
his menne, and thereby to become moze weake. The  
firste waye is done with keeping safe the thinges of  
some of those whiche he hath aboute him, as to saue  
in the warre theyr menne and theyr possessions, ren-  
dering them theyr children, or other theyr necessities  
withouthe raunsome. You knowe that Anniball ha-  
uing burned all the fieldes aboute Rome, he made  
onely to be reserued safe those of Fabius Maximus.  
You knowe howe Coriolanus coming with an ar-  
mie to Rome, preserued the possessions of the Nobil-  
tie, and those of the comminalltie he burned, and sac-  
ked. Metellus hauing an armye againste Jugurte,  
all the oratours, whiche of Jugurte were sente him,  
were required of him, that they woulde geue him Ju-  
gurte prisoner, and after to the very same men writing  
letters of the verie same matter, wrought in such wise,  
that in shorpe time Jugurte hauing in suspecte all his  
counsellours, in diuers maners put them to death. An-  
nibal being fledde to Antiochus, the Romaine oratours  
practised with him so familiarlye, that Antiochus being  
in suspecte of him, trusted not any moze after to his  
counsellis. Concerning to deuide the enemies men,  
there is no moze certainer waie, then to cause their coun-  
trei to be assaulted, to the intente that being constrai-  
ned to go to defende the same, they maye forsake the  
warre. This waye Fabius vsed hauing againste his  
armye

*the Art of Warre Fol. xc*

armie the power of the Frenchemen, of *Yulcás, Cim-*  
*bries* and *Sannites*. *Titus Didius* hauing a fewe men  
in respecte to those of the enemies, and looking for a le-  
gion from Rome, and the enemies purposing to go to in-  
counter it, to the intente that they shoulde not go, cau-  
sed to be noised through all his armye, that he intended  
the nexte daye to fighte the fielde with the enemies: af-  
ter he vsed meanes, that certayne of the prisoners, that  
he had taken afore, had occasion to runne awaye. Who  
declaring the order that the Consull had taken to fighte  
the nexte daye, by reason wherof the enemies being a-  
frayde to diminish their owne strength, went not to in-  
counter the same legion, and by this waye they were  
conducted safe. The which meanes scructh not to de-  
uide the force of the enemies, but to augmente a mans  
owne. Some haue vsed to deuide the enemies force,  
by letting him to enter into their countrie, and in p<sup>ro</sup>se  
haue let him take many towne, to the intent that put-  
ting in the same garnisons, he might thereby diminishe  
his power, and by this waye hauing made him weake,  
haue assaulted and overcome him. Some other min-  
ding to go into one p<sup>ro</sup>uince, haue made as though  
they would haue inuaded an other, and vsed so much  
diligence, that sodainlye entring into the same, where  
it was not doubted that they would enter, they haue  
firste wonne it: before the enemye coulde haue time to  
succoure it: for that thy enemye being not sure, whe-  
ther thou purpolest to tourne backe, to the place firste  
of th<sup>is</sup> th<sup>is</sup>reatened, is constrained not to forsake the  
one place, to succour the other, and so manye tymes he  
defendeth neither the one nor the other. It importeth  
besides the sayde thinges to a Capitayne, if there  
growe sedition or discorde among the Souldiours, to  
knowe with arte howe to extinguishe it: The beste  
waye is to chastice the heades of the faultes, but it  
muste be done in such wise, that thou mayest first haue

How Titus  
Didius sta-  
ed his ene-  
mies that  
were going  
to incounter  
a legion of  
men that  
were com-  
ming in his  
aide.

How some  
haue caused  
the enemye  
to deuide  
his force.

A policie to  
win the ene-  
mies coun-  
trie before  
he be aware

How to re-  
forme sedi-  
tion and dis-  
corde.



## *The sixth Booke of*

oppressed them, before they be able to be aware : The waye is, if they be distaunt from thee, not onely to call the offenders, but together with them all the other, to the entent that not belæuing, that it is for any cause to punish them, they become not contumelious, but giue commoditie to the execution of the punishment : When they be present, thou oughtest to make thy selfe strong with those that be not in faulte, and by meane of their helpe to punish the other. When there happeneth discorde among them, the best waye is, to bring them to the perill, the feare wherof is wonte alwayes to make them agree. But that, which aboue all other thing kepeth the armie in vnitie, is the reputation of the Capitayne, the which onely groweth of his vertue : because neither blood, nor audacitye gaue it euer without vertue. And the chiefe thing, which of a captayne is looked for to be done, is, to keepe his souldiours punished, and paid : for that when so euer the paye lacketh, it is conuenient that the punishment lacke : because thou canst not correcte a souldiour, that robbeth, if thou dost not paye him, nor the same minding to liue, can not abstayne from robbing : but if thou payest him, and punishest him not, he becometh in euerye condition insolente : For that thou becommest of small estimation, where thou chauncest not to be able to maintayne the dignitie of thy degree, and not maintayning it, there foloweth of necessitie tumult, and discorde which is the ruine of an armie. Olde Capitaynes had a trouble, of the whiche the presente be almoste free, whiche was to interprete to their purpose the sinister auguries : because if there fell a thunderbolte in an armie, if the Sunne were darkened or the Moone, if there came an earthquake, if the Capitayne either in getting vp, or in lighting of his horse fell, it was of his souldiours interpreted sinisterously : And it ingendred in them so much feare, that coming to fight the fildes, easely they should

The benefit that the reputation of the capitaine causeth vvhich is onely gotten by vertue.

The chiefe thing that a captaine ought to do.

VWhen paye wanteth, punishment is not to be executed.

The inconuenience of not punishing.

Shoulde haue losse it : and therefore the auncient Capitaynes so soone as a like accidente grewe, either they shewed the cause of the same, and reduced it to a naturall cause, or they interpreted it to their purpose. Cesar falling in Africa, in coming of the Sea, sayde, Africa haue taken thee. Whereouer manye haue declared the cause of the obscuring of the Moone, and of earthquakes: whiche thing in our tyme cannot happen, as well because our men be not so superstitious, as also for that our Religion taketh away altogether suche opinions: all be it when they shoulde chaunce, the orders of the antiquitie oughte to be imitated. When either famishment or other naturall necessitie, or humane passion, hath broughte thy enemy to an vtter desperation, and he is a uen of the same, cometh to fighte with thee, thou oughtest to stande within thy campe, and as murche as lieth in thy power, to fye the fighte. So the Lacedaemonians did againste the Malonians, so Cesar dyd againste Afranio, and Petrio. Fuluius being Consul, againste the Cimbrians, made his horsemen manye dayes continually to assaulte the enemies, and considered howe they issued oute of their campe for to followe them: wherfore he set an ambush behinde the Campe of the Cimbrians, and made them to be assaulted of his horsemen, and the Cimbrians issuing oute of their campe for to followe them. Fuluius gotte it, and sacked it. It hath bene of great vtilitie to a Capitayne, hauing his army nere to the enemies armie, to sende his men with the enemies anignes to robbe, and to burne his owne countrey, wherby the enemies believing those to be menue, whiche are come in theyr ayde, haue also runne to helpe to make them the praye: and for this disordering them selues, hath thereby given opportunitie to the aduersarye to overcome them. This waye Alexander of Epirus vsed againste the Illirians and Leptenus of Syracusa againste the Carthaginers,

Cesar chafing to fall, made the lame to be supposed to signify good lucke.

Religion taketh away fantastickall opinions.

In what cases a Capitaine ought not to fight with his enemy if hee maie otherwise choose

A policie of Fuluius wherby hee got & spoiled his enemies campe

A policie to disorder the enemy.

and

## The first Booke of

A policie to  
ouercome  
the enemye.

A policie.

How to be  
guile the o-  
nemye.

How Men-  
nonus train-  
ed his ene-  
mies out of  
strong pla-  
ces to bee  
the better a-  
ble to ouer-  
come them.

and both to the one and to the other, the deuise came to  
passe most happily. Many haue ouercome the enemye,  
geuing him occasion to eate and to drinke out of mea-  
sure, sayning to haue feared, and leauing their Campes  
full of wine and herdes of cattell, wherof the enemye  
being filled aboue all naturall vse, haue then assaulted  
him, and with his destruction ouerthrowen him. So Ta-  
mirus did against Cirus, & Liberius Craccus against  
the Spaniards. Some haue poisoned the wine, & other  
thinges to feede on, so to be able moze easely to ouer-  
come them. I sayde a litle afoze howe I founde not, that  
the antiquitie kept in the night Scouts abroade, and  
supposed that they did it so to auoyde the hurte, whiche  
might growe thereby: because it is founde, that throughte  
no other meane then through the watche man, whiche  
was set in the daye to watche the enemye, hath bene  
cause of the ruine of him, that set him there: so that  
manye times it hath happened, that hee being taken,  
hath bene made perforce to tell them the token, wher-  
by they might call his fellows, who comming to the  
token, haue bene slayne or taken. It helpeth to beguile  
the enemye sometime to vary a custome of thinge, wher-  
vpon hee hauing grounded him selfe, remaineth rui-  
nated: as a Capitayne did once, whome vsing to cause  
to be made signes to his men so comming of the ene-  
mies in the night with fire, and in the daye with smoke,  
commanded that withoute anye intermission, they  
shoulde make smoke and fire, and after comming  
vppon them the enemye, they shoulde rest, whome  
belœuing to come without being seene, perceyuing  
no signe to be made of being discovered, caused (through  
going disordered) moze easely the victozye to his ad-  
uersarye. Mennonus a Robian minding to drawe  
from strong places the enemies armye, sente one vnder  
coloure of a fugitive, the whiche affirmed, howe  
his armye was in disorde, and that the greater parte  
of



of them wente awaye: and so; to make the thlog to be credited, he caused to make in sport, certaine tumultes among the lodgings: whereby the enemye thinking thereby to be able to discomfight them, assaulting them, were ouertholwen.

Besides the sayde thinges, regarde oughte to be had not to bring the enemye into extreme desperacion: wherunto Cesar had regarde, fighting with the Duchemen, who opened them the waye. seing, howe they being not able to flie, necessitie made them strong, and would rather take paine to follow them, when they fled, then the perrill to overcome them, when they defended them selves:

Lucullus seing how certaine Macedonian ho;semen, whiche were with him, wente to the enemies parte, straight waye made to sounde to battaile, and commaunded, that the other men should folowe him: whereby the enemies beleuing that Lucullus would begin the fight, went to incounter the same Macedonians, with such violence, that they were constrained to defend them selves: and so they became againste their willes, of sugetines, fighters. It importeth also to know, how to be assured of a towne, when thou doubttest of the fidelitie thereof, so soone as thou hast wonne the ficke, or before, the which certaine old insamples may teach thee.

Pompei doubting of the Catenensians, prayed them that they woulde be contente, to receiue certaine sicke menne, that he had in his armye, and sending vnder the habite of sicke persones, moste lustye men, gotte the towne. Publius Valorius, fearing the fidelitie of the Epidaurians, caused to come, as who sayeth, a Pardou to a churche without the towne; and when all the people were gone for Pardou, he shutte the gates, receiuing after none in, but those whome he trusted.

Alexander Magnus, minding to go into Asia, and to assure him selfe of Thracia, toke with him all the prin-

The enemye oughte not to be brought into extreme desperacion.

Howe Lucullus constrained certaine men that ran away from him to his enemies, to fight whether they wold or not

A polencie whereby pay gotte a towne.

Howe publius valerius assured him selfe of a towne.

A polencie that Alexander Magnus used to be assured of all

cipall

## The sixt Booke of

Tracia, vvhich  
the Philip  
King of  
Spaine did  
practise to  
be a fured of  
England  
vvhhen hee  
vvent to S.  
Quintens.  
Examples for  
Captains to  
winne the  
hartes of  
the people.

ripall of the same prouince, giuing them pzonition, and  
he set ouer the common people of Thracia, men of lowe  
degre: and so he made the Princes contented with pay-  
ing them, and the people quiete, hauing no heades that  
shoulde disquiete them: But among all the thinges, with  
the which the Captaines, winne the hartes of the people,  
be the ensamples of chastitie & iustice, as was the same  
of Scipio in Spaine, wher he rendered that yong womā  
moste faire of personage, to her father, and to her hus-  
bande: the which made him moze, then with force of ar-  
mes to winne Spaine.

Cesar hauing caused that wood to be paid for, which  
he had occupied for to make ʒ Liffes, about his armie in  
france, got so much a name of iustice, ʒ he made easier  
the conquest of the same prouince. I cannot tell what re-  
maineth me, to speake moze vpo these accidentes, for ʒ  
concerning this matter, there is not left any part, ʒ hath  
not bene of vs disputed. Onely there lacketh to tel, of the  
maner of winning, & defending a towne, the which I am  
readie to do willingly, if you be not now wearie.

Baptiste. Your humanitie is so much, that it maketh  
vs to folowe oure desires, withoute being afraide to be  
reputed presumptuous, seing that you liberally offer the  
same, which we shoulde haue bene ashamed, to haue as-  
ked you: Therefore, we saye vnto you onely this, that to  
vs you cannot do a greater, nor a moze gratefuller be-  
nefite, then to finishe this reasoning. But befoze that  
you passe to that other matter, declare vs a doubte, whe-  
ther it be better to continue the warre, as well in the  
Winter, as they vse nowe adairs, or to make it one-  
ly in the Sommer, and to go home in the Winter, as  
the antiquitie did.

Fabritio. See, that if the prudence of the deman-  
der were not, there had remained behind a special part,  
that deserveth consideration. I answere you againe,  
that the antiquitie did all thinges better, and with  
moze

more prudence then two: and if two in other things com-  
 mit some erreure, in the affaires of warre, was committed  
 all erreur. There is nothing more vndiscreet, or more  
 perrillous to a Capitayne, then to make warre in the  
 Winter, and muche more perrill beareth he, that ma-  
 keth it, then he that abideth it: the reason is this. All the  
 industrie that is vsed in the discipline of warre, is vsed  
 for to be prepared to fighte a fielde with thy enemies: the  
 cause this is the ende, whereunto a Capitayne oughte  
 to go or endeuour him selfe: for that the soughten  
 fielde, geueth thee the warre wonne or losse: then he that  
 knoweth best how to order it, and he that hath his army  
 beste instructed, hath mooste aduantage in this, and  
 maye beste hope to ouercome. One the other side, the  
 is nothing more enemy to the orders, & then the rough  
 situations, or the colde watery time: for that the rough  
 situations, suffereth thee not to descende thy bandes, ac-  
 cording to thee discipline: the colde and watery times,  
 suffereth thee not to keepe thy men together, nor thou  
 canst not bring them in good order to the enemy: but it is  
 conuenient for thee to lodge them a sunder of necessitie,  
 and without order, being constrained to obeye to Cas-  
 tles, to Bozoughes, and to the Villages, that maye re-  
 ceue thee, in maner that all thy lebourne of thee, vsed to  
 instructe the army is. vaine. For maye you not  
 though now a daies, they warre in the Winter, because  
 the armies bring without discipline, know not the hurt  
 that it dooth them, in lodging not together, for that it is  
 no grieve to them not to be able to keepe those orders, &  
 to obserue that discipline, which they haue not: yet they  
 oughte to see howe much harme, the Camping in the  
 Winter hath caused, and to remember, how the French  
 men in the yeare of oure Lorde God, a thousande five  
 hundred and thre, were broken at Cardiano of the  
 Winter, and not of the Spaniards: for as much as I  
 haue saide, he that assaulteth, hath more disaduantage,  
 then

Warre  
 ought not to  
 be made in  
 winter.

Rough situ-  
 acions, colde  
 and vvatrie  
 times, are e-  
 nemies to  
 the order of  
 vvarre.

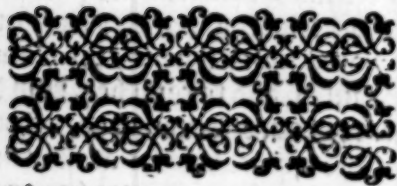
An cuer-  
 throe cau-  
 sed by vvinter.



## *The sixt Booke of*

thou he that defendeth: because the soyle weather hurteth him not a littell, being in the dominion of others & minding to make warre. For that he is constrained, either to stande together with his men, and to sustaine the incommodie of water and colde, or to anoide it to detride his power: But he that defendeth, may chuse the place as he listeth, and tary him with his freshe me: and he in a sodayne may set his men in aray, and go to find a band of the enemies men, who cannot resiste the violence of them. So the Frenchemen were discomfited, and so they shall alwayes be discomfited, which will as faulte in the Winter an enemye, who hath in him prudence. When he that will that force, that orders, that discipline and vertue, in anye condition auaille him not, let him make warre in the felds in the winter: and because that the Romaines woulde that all these thinges, in which they bestowed so much diligence, should auaille them, as doe no otherwise the Winter, then the highe Alpes, and difficulte places, and whatsoeuer other thing shoulde let them, for being able to shewe their arte and their vertue. So this suffiseth to your demand, wherefoze we wil come to intreate of the desending and besieging of townes, and of their situacions and edificacions.

Who



¶ *The ſeuenth Booke of the Arte*

of warre, of Nicholas Machiauel, Citezen and Secre-  
tarie of Florence, vnto Laurence  
Philip Strozze.



O V oughte to knowe howv that townes  
and fortresses, maye bee strong either  
by nature, or by industrie: by nature,  
those be strong, which bee compassed a-  
bout with riuers, or with fennes, as  
Pantua is and Ferrara, or whiche bee

Townes &  
Fortresses  
mai be strong  
tyvo vvaies.

builded vpon a Rocke, or vpon a steepe hille, as Mona-  
co, and Sanleo: for that those that stande vpon hilles,  
that bee not muche difficult to go vpon, bee nowe a dayes  
considering the artillerie and the Canes, most weake.  
And therfore most often times in buylding, they seeke  
nowe a dayes a playne, for to make it strong with in-  
dustrie.

The place  
that nowe a  
daies is most  
soughte to  
fortune in.

The firste industrie is, to make the walles crooked,  
and full of tourninges, and of receiptes: the whiche  
thing maketh, that the enemye cannot come nere to it,  
because hee maye bee hurte, not onely on the front, but  
by flank. If the walles bee made high, they bee to  
muche subiecte to the blowes of the artillerie: if they  
bee made lowe, they bee moste easie to scale. If thou  
makeste the ditches on the out side thereof, for to giue  
difficultie to the Ladders, if it happen that the enemye  
fill them vpon (whiche a great armie may easily doe) the  
wall remayneth taken of the enemye. Therfore purpo-  
sing to prouide to the one and the other sozsayd incon-  
ueniencies, I beleue (saving alwayes better iudge-  
ment) that the wall oughte to bee made high, and the  
Diche within, and not without.

How a tow-  
ne vvall ou-  
ghte to bee  
made.

The vvall of  
a towne ou-  
ght to be  
high, & the  
diche vvith-  
in, & not  
vvithout.

Aa.ij.

This

## The seventh Booke of

**This** is the moſte ſtrongeſt waye of edification, that is made, for that it defendeth thee from the artillerie, and from Ladders, and it giveth not facilitie to the enemye, to fill up the ditch: Then the wall oughte to be high, of that height as ſhall be thought beſt, and no leſſe thicke, then two yardes and a quarter, for to make it more difficulte to ruinate. Whereoner it oughte to haue the toures placed, with diſtaunces of hundred and fifty yardes betwene the one and the other: the ditch with in, ought to be at leaſt two and twenty yardes and a halfe broad, and nine deepe, and all the earth that is digged out, for to make the ditch, muſt be throwen towards the Citie, and kepte up of a wall, that muſt be raiſed from the bottom of the ditch, and go ſo high over the towne, y<sup>a</sup> a man may be couered behinde the ſame, the which thing ſhall make the depth of the ditch the greater. In the bottome of the ditch, within every hundred and fifty yardes, there would be a ſlaughter houſe, which with the ordinaunce, maye hitte whome ſo ever ſhoulde go downe into the ſame: the great artillerie that defende the Citie, are planted behinde the wall, that ſhutteth the ditch, becauſe for to defende the vtter wall, being high, there cannot be occupied commodiouſlye, other then ſmall ordinaunce. If the enemye come to ſcale, the height of the firſte wall moſt eaſilye defendeth thee: if he come with ordinaunce, it is convenient for him to batter the vtter wall: but it being battered, for that the nature of the battery is, to make the wall to fall, towardeſ the parte battered, the ruine of the wall cometh, finding no ditch that receyueth and hideth it, to redouble the profunditie of the ſame ditch: after ſuche ſorte, that to paſſe anye further, it is not poſſible, finding a ruine that withholdeth thee, a ditch that letteth thee, and the enemyes ordinaunce, that from the wall of the ditch, moſte ſafelye killeth thee. Wherfore there is this remedy, to fill the ditch: the

which

The thicke-  
nes that a  
townt wall  
ought to be  
of, & the diſ-  
taunces be-  
twene eue-  
ry flanker, &  
of what  
breadthe &  
depth the  
ditch oughte  
to be.

How the or-  
dinaunce is  
planted, for  
the defence  
of a towne.

The nature  
of the bat-  
taile.



Which is most difficulte to do, as well because the capacitie thereof is great, as also for the difficultie, that is in coming nere it, the wall being strong and concealed, betwene the which, by the reasons aforesaide, with difficultie may be entered, having after to go by a breach through a ruine, which giueth the most great difficultie, so that I suppose a citie thus builded, to be altogether invincible.

Baptiste. When there should be made besides the ditch within, a ditch also without, shoulde it not be stronger.

Fabritio. It shoulde be without doubt, but minding to make one ditch onely, mine opinion is, that it standeth better within then without.

Baptiste. Woulde you, that water shoulde be in the ditches, or woulde you haue them drie?

Fabritio. The opinion of men herein be diuers, because the ditches full of water, saue the from mines vnder ground. the Ditches without water, maketh more difficulte the filling of them: but I having considered all, would make them without water, for that they be more sure: for ditches with water, haue bene seen in the Winter to be frosen, and to make easy the winning of a citie, as it happened to Pirandola, when Pope Iulie besieged it: & for to saue me from mines, I would make it so deepe, that he that would digge lower, should finde water. The Fortresses also, I woulde builde concerning the ditches and the walles in like maner, to the intente they shoulde haue the like difficultie to be wonne. One thing I will earnestly aduise him, that defendeth a citie: and that is, that he make no Bulwarkes without distant from the wall of the same: and another to him that buildeth the Fortresse, and this is, that he make not anye refuge place in them, in which he that is within, the firste wall being losse, may retire: That whiche maketh mee to giue the firste coun-

saile,

A drie ditch  
is moste  
refie.

An aduertis-  
ment for the  
building &  
defending  
of a Towne  
or fortresse.

## The ſeuenth Booke of

ſaile is, that no man ought to make any thing, by means wherof, he maye be diuened without remedy to leſe his firſt reputation, the which loſing, cauſeth to be eſteemed leſſe his other doinges, and maketh afraied them, whom haue taken vpon them his defence, and alwayes it ſhall chaunce him this, whiche I ſaye, when there are made Bulwarkes out of the Towne, that is to bee defended, becauſe alwayes he ſhall leſe them, litle thinges nowe a dayes, being not able to bee defended, when they bee ſubiecte to the furie of ordinance, in ſuche wiſe that loſing them, they bee beginning and cauſe of his ruine.

Small fortrelles can not bee defended.

When Genua rebelled againſt king Lewis of France, it made certaine Bulwarkes a loſſe on thoſe hilles, which bee about it, the which ſo ſone as they were loſt whiche was ſodainly, made alſo the citie to be loſt. Concerning the ſeconde counſaile, I affirme nothing to bee to a Fortreſſe moze perilous, then to be in the ſame refuge places, to be able to retire: Becauſe the hope that men haue therby, maketh y they leſe the bitter warde, when it is aſſaulted: and that loſt, maketh to be loſt after, all the Fortreſſe. For inſample there is freſh in remembrance, the loſſe of the Fortreſſe of Furlpe, when Catherin the Counteſſe defended it againſt Ceſar Borgia, ſonne to Pope Alexander the vi. who had conducted thether y armie of the king of France: y ſame Fortreſſe, was all full of places, to retire out of one into another: ſo that there was firſt the kape, from the ſame to the Fortreſſe, was a ditch after ſuche ſorte, that they paſſed ouer it by a drawe brydge: the Fortreſſe was deuided into thre partes, and euerye parte was deuided from the other with ditches, and with water, and by Bridges, they paſſed from the one place to the other: wherefore the Duke battered with his artillerie, one of the partes of the Fortreſſe, and opened parte of the wall: For whiche cauſe Maſter Ihon Caſale, whiche was appointed to that Warde, thoughte not

A towne of war or Fortreſſe ought not to haue in them any retiring places.

Ceſar Borgia.

god

god to defende that by cache, but abandoned it for to retire him selfe into the other places: so that the Dukes men hauing entered into that parte without encounter, in a sodaine they gotte it all: For that the Dukes men became lordes of the bridges, which wente from one place to another. They losse then this foztresse, which was thoughte inuincible, throughe two defaultes, the one for hauing so many retiring places, the other, because euery retiring place, was not Lord of the bridge thereof. Therefore, the naughtie builded foztresse, and the little wisdom of them that defended it, caused shame to the noble enterpryse of the countesse, who had thought to haue abidden an armie, which neither the King of Naples, nor the Duke of Milaine would haue abidden: and although his inforcements had no good end, yet notwithstanding he gotte that honoure, which his valiauntnesse had deserued: The which was testified of many Epigrames, made in those dayes in his praise. Therefore, if I should haue to builde a foztresse I would make the walles strong, and the diches in the maner as we haue reasoned, nor I would not make therein other, the houses to inhabite, and those I would make weake and lowe, after such sorte that they should not let him that should stande in the middelt of the market place, the sighte of all the walle, to the intente that the Capitayne might see with the eye, where he maye succoure: and that euery man shoulde vnderstande, that the walle and the dicke being lost, the foztresse were losse. And yet when I should make any retiring places, I would make the bridges deuided in suche wise, that euery parte shoulde be Lord of the bridges of his side, ordainyng, that they should fall vpon postes, in the middelt of the dicke.

The causes  
of the losse  
of Fortresse  
of Furlie,  
that was  
thought in-  
uincible.

Howe the  
houses that  
are in a towne  
of war  
or fortresse  
ought to be  
builded.

Baptiste. You haue sayde that littell thinges now a dayes can not be defended, and it seemed vnto me to haue vnderstande the contrarye, that the lesser  
that



## *The seventh Booke of*

that a thing were, the better it might be defended.

The fortifi-  
ing of the  
entrance of  
a Towne.

Fabritio. You haue not vnderstande well, because that place cannot be now a daies called strong, where he that defendeth it, hath not space to retire with newe ditches, and with newe fortifications, for that the force of the ordinance is so much, that he that trusteth vpon the warde of one wall and of one fortification onely, is deceyued: and because the Bulwerkes (minding that they passe not their ordinary measure, for that then they shoulde be townes and Castles) be not made, in such wise that men maye haue space within them to retire, they are lost straight waye. Therefore it is wisdom to let alone those Bulwerkes without, and to fortifie the entrance of the towne, and to couer the gates of the same with tourninges after such sort, that men cannot go in nor out of the gate by right line: and from the turninges to the gate, to make a ditch with a bridge. Also they fortifie the gate, with a Percullis, for to be able to put therein their men, when they be issued out to fighte, and hapning that the enemies pursue them, to auoide, that in the mingling together, they enter not in with them: and therfore these be vied, the whiche the antiquitie called Cattarratte, the whiche being let fall, exclude the enemies, and saue the friendes, for that in suche a case, men can do no good, neither by bridges nor by a gate, the one and the other being occupied with prease of men.

Baptiste. I haue seene these Perculleses that you speake of, made in Almane of litle quarters of wood after the fashion of a grate of yron, and these perculleses of ours, be made of planks all massiue: I woulde desire to vnderstande whereof groweth this difference, & which be the strongest.

Fabritio. I tell you agayne, that the maners and orders of the warre, throughte out all the world, in respecte to those of the antiquitie, be extinguished,  
and

*the Art of Warre* Fo. xcvi

and in Italye they be altogether losse, for if there be a thing somewhat stronger then the ordinarie, it groweth of the insample of other countries. You mighte haue understode, and these other may remember, with howe muche debilitie befoze, y<sup>e</sup> king Charles of Fraunce in the yere of our saluation a thousande CCC. xciii. had passed into Italye, they made the batelmentes not halfe a yarde thicke, the lopes, and the flankers were made with a litle opening without, and muche within, and with manye other faulces whiche not to be tedious I will let passe: for that easely from thinne battelments the defence is taken awaye, the flankers builded in the same maner, mosse easelye are opened: Nowe of the Frenchemen is learned to make the battelment large and thicke, and the flankers to be large on the parte within, and to dwale together in the middeste of the wall, and then agayn to wale wider vnto the uttermost parte without: this maketh that the ordinaunce hardelye can take awaye the defence. Therfoze the Frenchemen haue, manye other deuises like these, the whiche because they haue not bene sene of our men, they haue not bene considered. Among whiche, is this kinde of perculles made like vnto a grate, the which is a greafe deale better then oures: for that if you haue for defence of a gate a massiue parculles as oures, letting it fall, you shutte in your menne, and you can not though the same hurte the enemye, so that be with ares, and with fire, maye breake it downe safelye: but if it be made like a grate, you maye, it being let downe, through those holes and through those open places, defende it with pikes, with crosbowes, and with all other kinde of weapons.

Battelments ought to be large and thicke & the flankers large within.

Baptiste. I haue sene in Italye an other vse after the outlandishe fashion, and this is, to make the carriage of the artillery with the spokes of y<sup>e</sup> whele crooked towarde the Arctre. I woulde knowe why they

B. l. make

## *The ſeuenth Booke of*

make them ſo : ſeeming vnto mee that they bee ſtronger when they are made ſtraighte as thoſe of oure wheeles.

Fabritio. Neuer beleue that the thinges that diſfer from the ordinarie wayes, be made by chaunce: and if you ſhoulde beleue that they make them ſo, to the waſpzer, you are deceaued: becauſe where ſtrength is neceſſarie, there is made no counte of ſapzenelle : but all groweth, ſo, that they be muche ſurer and muche ſtronger then ours. The reaſon is this: the carte when it is laden, either goeth euen, or leaning vpon the righte, or vpon the lefte ſide : when it goeth euen, the wheeles equally ſuſtayne the wayght, the which being equallye deuided betwene them, doth not burden much, but leaning, it commeth to haue all the paſſe of the cariage on the backe of that wheele vpon the which it leaneth. If the ſpokes of the ſame be ſtraight they wil ſone bzeake: ſo, that the wheele leaning, & ſpokes come alſo to leane, and not to ſuſtaine the paſſe by the ſtraightneſſe of them and ſo when the carte goeth euen, and when they are leaſt burdened, they come to be ſtrongeſt : when the Carte goeth awrye, and that they come to haue moſte paſſe, they bee weakeſt. Euen the contrarie happeneth to the crooked ſpokes of the French Cartes, ſo, that when the carte leaning vpon one ſide poincth vppon them, becauſe they be ordinary crooked, they come then to be ſtraight, and to be able to ſuſtayne ſtrongly al the payſe, where when the carte goeth euen, and that they be crooked, they ſuſtayne it halfe : but let vs tourne to our citie and Fortreſſe. The Frenchemen vſe alſo ſo, moze ſafegarde of the gates of their towneſ, and ſo, to be able in ſieges moze eaſilye to conuey and ſet oute men of them, beſides the ſayde thinges, an other deuſe, of which I haue not ſene yet in Italye anye inſample: and this is, where they rayſe on the oute ſide from the ende of the drawe brydge two poſtes, and vpon either  
of



of them they ioigne a beame, in suche wise that the one halfe of them comes ouer the bidge, the other halfe with oute: then all the same parte that commeth withoute, they ioygne together with small quarters of woodde, the whiche they set thicke from one beame to an other like vnto a grate, and on the parte within, they fasten to the ende of either of the beames a chaine: then when they will shutte the bidge on the oute side, they slacke the chaines, and let downe all the same parte like vnto a grate, the whiche comming downe, shutteth the bidge, and when they will open it, they drawe the chaines, and the same cometh to rise vp, and they maye raise it vp so much that a man may passe vnder it, & not a horse, and so much that there maye passe horse & man, and shutte it againe at ones, so that it falleth and riseth as a window of a battlement. This deuise is moze sure than the Parculles, because hardely it maye be of the enemye lette in such wise, that it fall not downe, falling not by a right line as the Parculles, which easely may be vnderpopped. Therefore they which will make a citie oughte to cause to be ordained all the saide things: & mozeouer aboute the walle, there woulde not be suffered any grounde to be tilled, within a myle thereof, nor any wall made, but shoulde be all champaine, where shoulde be neither ditch nor banck, neither tre nor house, which might let the sighte, and make defence for the enemye that incampeth.

Neither tre ditch, vvall tillage, nor any kinde of edification, ought to be within a mile of a towne of warre.

And note, that a Towne, whiche hath the ditches withoute, with the banckes higher then the grounde, is moste weake: for as muche as they make defence to the enemye, which assaulteth the, and letteth him not hurte the, because easely they may be opened, and geue place to his artillerie: but let vs passe into the Towne. I will not lose so muche time in shewing you howe that besides the foresayde thinges, it is requisite to haue prouision of victualles, and where with to

Note.

## The ſeuenth Booke of

The proui-  
ſion that is  
meete to be  
made for  
the defence  
of a towne.

ſight, ſoꝛ that they be thinges that euerye man vnder-  
deth, and without them, all other prouiſiō is vaine: and  
generally two thinges oughte to be done, to proui-  
de and to take the commoditie from the enemye that he a-  
uaille not by þ thinges of the countrey: therfoze þ ſtraw,  
the beaſtes, the graine, whiche thou canſte not receiue  
into houſe, ought to be deſtroied. Alſo he that defendeth  
a Towne, oughte to proui-  
de that nothing bee done tu-  
multuouſlye and diſordinate-  
lye, and to take ſuche oꝛder,  
that in all accidentes euerye man maye knowe what he  
hath to doo.

The oꝛder that oughte to be taken is thus, that the  
women, the olde folkes, the childzen, and the impotent,  
be made to keepe within doores, that the Towne maye  
be left free, to yong and luſtie men, whom being armed,  
muſt be deſtributed ſoꝛ the defence of the ſame, appoin-  
ting part of them to the wall, parte to the gates, parte to  
the principall places of the Citie, ſoꝛ to remedie thoſe in-  
conueniences, that might growe within: an other parte  
muſt not be bound to any place, but be ready to ſuccour  
all, neede requiring: and the thing being oꝛdained thus,  
with difficultie tumulte can growe, whiche maye diſ-  
oꝛder thee. Alſo I will that you note this, in the be-  
ſieging and defending of a Citie, that nothing geueth ſo  
much hope to the aduerſarye to be able to winne a  
towne, as when he knoweth that the ſame is not accuſ-  
tomed to ſee the enemye: ſoꝛ that many times ſoꝛ feare

what inco-  
uagethe the  
enemy moſt  
that beſie-  
geth a towne

Vwhat he  
chat beſie-  
geth and he  
that defend-  
eth oughte  
to doo.

onely without other experience of foꝛce, cities haue bene  
loſte: Therfoze a man oughte, when he aſſaulteth a  
like Citie, to make all his oſtentacions terrible. On  
the other parte he that is aſſaulted, oughte to appointe  
to the ſame parte, whiche the enemye ſighteth againſte,  
ſtrong men and ſuche as opinion maketh not aſtraide,  
but weapoꝛs onely: ſoꝛ that if the firſt praſe turne vaine,  
it increaſeth boldeneſſe to the beſieged, and then the  
enemye is constrained to overcome them within, with  
vertue

Vertue and reputacion. The instrumentes wherewith the antiquitie defended Townes, were manye: as ballistes, onagris, Scorpions, Arcubalistes, Fustiballs, Slinges: & also those were many with which they gaue assaultes. As Arctiti. Towers, Pusculi, Plutai, Cliney, Falci, Testudeni, in steede of which thinges be now a daies the ordinaunce, the whiche serue him that besiegeth, and him that defendeth: and therefore I wil speake no farther of them: But let vs returne to oure reasoning, and let vs come to perticular offences. They oughte to haue care not to be taken by famine, and not to be overcome throughte assaultes: concerning famine, it hath bene told, that it is requiit before the siege come, to be well prouided of victualles. But when a Towne throughte long siege, lacketh victualles, sometimes hath bene seen vned certain extraordinary waies to be prouided of theyr friends, whom would saue them, in especial if throughte the middest of the besieged Citie there runne a riuer, as the Romaines vittelled their castell called Casalino besieged of Aniball, who being not able by the riuer to sende them other victuall then Ruttes, whereof casting in the same greate quantetie, the which carried of the riuer, withoute being able to be letted, fedde long time the Casalinians. Some besieged, for to shew vnto the enemye, that they haue graine more then inough and for to make him to dispaire, that he cannot, by famine overcome them, haue caste breade out of the Gates, or geuen a Bullocke graine to eate, and after haue suffered the same to be taken, to the intent that hulde and found full of graine, might shew that abundance, which they had not. On the other parte excellent Capitaines haue vned sundry waies to weary the enemye.

Scabius suffered them whom he besieged, to sow their fieldes, to the entente that they shoulde lacke the same coyne, which they sowd.

A duertifemiers for a besieged town

How the Romaines vittelled Casalino besieged of Aniball.

A policy for the besieged

A policy of Scabius in besieging of a town.

Dionisius



## The seventh Booke of

A polecie of  
Dionisius in  
besieging of  
a towne.

Dionisius being in Campe at Regio, sained to minde to make an a gramente with them, & during the practise thereof, he caused him selfe to be prouided of theyr victualles, and then when he had by this meane got from them their graine, he kepte them straighte and famished them.

Howe Alex  
ander vvane  
Leucadia.

Alexander Magnus minding to winne Leucadia o-  
uercame all the Castelles aboute it, and by that meanes  
driving into the same Citie a greate multitude of theyr  
owne countrey men, famished them.

The besie-  
ged oughte  
to take heed  
of the firste  
brunte.

Concerning the assautes, there hath been tolde that  
chiefely they oughte to be ware of the first brunte, with  
which the Romaines got often times many townes, as-  
saunting them sodainely, and on euery side: and they cal-  
led it, Aggredi urbem corona. As Scipio did, whē he wan-  
newe Carthage in Hispaine: the whiche brunte is of a  
towne it be with stode, with difficultie after will be o-  
uercome: and yet though it should happen y the enemye  
were entred into the Citie, by overcomming the walle,  
yet the townes men haue some remedy, so they forsake  
it not: for as much as many armies throughe entring in-  
to a towne, haue bene repulced or slaine: the remedy is,  
that the townes men doe keepe them selues in high pla-  
ces, and from the houses, and from the towers to fight  
with them: the whiche thing, they that haue entered into  
the Citie, haue deuised to overcome in two maners: the  
one with opening the Gates of the Citie, and to make y  
waye for the Townes men, that they might safelye flee:  
the other with sending forth a proclamation, that signi-  
feth that none shall be hurt but the armed, and to them  
that cast their weapons on the ground, pardon shall be  
graunted: the which thing hath made easie the victorie of  
many Cities.

The reme-  
die that  
townes me  
haue, vvhen  
the enemies  
are entered  
into the  
towne.

Howe to  
make the  
townes me  
yeelde.

Howe tow-  
nes or cities  
are easly  
wonne.

Besides this, the Cities are easly to be wonne, if  
thou come vpon them vnawares: which is done bee-  
ing with thy armye farre of, after suche sort, that it be  
not

not beleued, either that thou wilt assault them, or that thou canst do it, without comming openly, because of the distance of the place: wherefore, if thou secretly and secretly assaulte them, almost alwayes it shall followe, that thou shalt get the victorie. I reason vnwillingly of the thinges succeded in our time, for that to mee and to mine, it shoulde be a burthen, & to reason of other, I cannot tell what to saye: notwithstanding, I cannot to this purpose but declare, the insample of Cesar Borgia, called Duke Valentine, who being at Forera with his men, vnder colour of going to besiege Camerino, turned towarde the state of Arbin, and got a state in a day and without any payne, the which an other with murbe time and cost, shoulde scante haue gotten. It is conueniente also to those, that be besieged, to take heed of the deceiptes, and of the policies of the enemye, and therefore the besieged, ought not to trust to any thing, whiche they see the enemye do continually, but let them beleue alwayes, that it is vnder deceipt, and that he can to their hurte vary it. Domitio Caluino besieging a towne, vsed for a custome to compasse aboute euery daye, with a good parte of his men, the wall of the same: whereby the Townes men, beleuing that he did it for exercise, slacked the Warde: wherof Donicius being aware, assaulted and overcame them.

Certayn Capitayns vnderstanding, that there should come aide to the besieged, haue apparreled their Souldiours, vnder the Ansigne of those, that should come, and being let in, haue gotte the Towne.

Simon of Athens, set fire in a nighte on a Temple, whiche was oute of the Towne, wherefore the Townes men going to succour it, left the towne in pray to the enemye. Some haue slayne those, whiche from the besieged Castle, haue gone a foraging, and haue apparreled their Souldiours, with the apparel of the foragers, whome after haue gotte the Towne. The au-

Hovve duke Valentine got the citie of Vrbine,

The besieged oughte to take heed of the deceiptes & policies of the enemye.

Hovve Domitio Caluino won a towne.

A policie to get a towne

Hovv Simo of Athens won a towne.

A policie to get a towne

ciente

## The ſeuenth Booke of

How Scipio  
got certaine  
cattles in A-  
frica.

clente Capitaynes, haue alſo vſed diuers wayes, to deſtroy the Garrifon of the towne, which they haue ſought to take. Scipio being in Africa, and deſiring to get certaine Caſtles, in which were put the Garrifons of Carthage, he made many times, as though he would aſſault them, albeit, he ſayned after, not onely to abſtaine, but to go awaye from them ſo; feare: the which Anibal be- leuuing to be true, ſo; to purſue him with greater force, and ſo; to be able moze eaſly to oppreſſe him, by ſeizing out all the garrifons of them: The which Scipio knowing, ſent Maſſinilla his Capitayne to overcome them.

How Pir-  
rus v vanne  
the chiefe  
citie of Scla-  
uonie.

Pirrus making warre in Sclauonie, to the chiefe Citie of the ſame countie, where were brought manie menne in Garrifon, ſayned to diſpaye to be able to winne it, and turning to other places, made that the ſame ſo; to ſuccour them, emptied it ſelfe of the warde, and became eaſie to be wonne. Many haue corrupted the water, and haue tourned the riuers an other waye to take Townes. Alſo the beſieged, are eaſly made to yeelde them ſelues, making them aſſayed, with ſignifying vnto them a victorie gotten, or with newe aides, which come in their diſſauour. The olde Capitaines haue ſought to get townes by treſon, corrupting ſome within, but they haue vſed diuers meanes. Some haue ſente a man of theirs, whiche vnder the name of a fugitiue, mighte take authoritie and truſte with the enemies, who after haue vſed it to their proſite.

A policie to  
get a towne

Howe the  
beſieged are  
made to  
yeelde.

How to  
get a towne  
by treſon.

A policie of  
Anibal for  
the betray-  
ing of a Ca-  
ſtle

Some by this meanes, haue vnderſtood the maner of the watche, and by meanes of the ſame knowledge, haue taken the Towne. Some with a Carte, or with beames vnder ſome colour, haue letted the gate, that it coulde not be ſhutte, and with this waye, made the entrie eaſy to the enemye. Anibal perſwaded one, to giue him a Caſtle of the Romanes, and that he ſhould ſayne to go a hunting in the nighte, making as though he coulde not go by daye, ſo; feare of the enemies, and  
four.



tourning after with the Cleonison, shoulde put in with him certayne of his men, and so killing the watchmen, shoulde giue him the gate. Also the besieged are beguiled, with drawing them out of the Towne, and going awaye from them, sayning to flie when they assault the. And many (among whome was Anibal) haue so; no other intente, let their Campe to be taken, but to haue occasion to gette betwene them and home, and to take their Towne. Also, they are beguyled with sayning to departe from them, as Spermion of Athens did, who hauing spoiled the countrey of the Calcidensians, receiued after their ambassadours, filling their Citie with faire promises, and hope of safetie, vnder the whiche as simple men, they were a litle after of Spermion oppressed. The besieged ought to beware of the men, whiche they haue in suspect among them: but some times they are wont, as well to assure them selues with deserte, as with punishment. Marcellus knowing howe Lucius Bancius a Polane, was tourned to fauour Anibal, so much humanitie and liberalitie, he vsed towarde him, that of an enemye, he made him most friendly. The besieged oughte to vse more diligence in the warde, when the enemye is gone from them, then whē he is at hand. And they oughte to warde those places, whiche they thinke, that maye bee hurt least: so; that manye towne haue been lost, when the enemye assaulteth it on the same part, where they beleue not possible to be assaulted. And this deceit groweth of two causes, either so; the place being strong, and to beleue that it is inuincible, or through craft being vsed of the enemye, in assaulting them on one side with fained laroms, and on the other withoute noise, and with very assaults in daie: and therfore the besieged, ought to haue great aduertisement, and about all thinges at all times, and in especiall ye in the nights to make good watche to be kepte on the walles, and not onelye to appointe men, but Dogges, and such

Howe the besieged maye be beguiled.

Howe Spermion ouercame the calcidensians.

What the besieged muste take heede of.

Liberalitie maketh enemies frendes. The diligence that the besieged ought to vse in their watche and warde.

## *The ſeuenth Booke of*

ſierſe Paſſiues, and liuely, the which by their ſent maye deſcrie the enemye, and with barking diſcouer him: and not Dogges onely, but Ceeſe haue bene ſene to haue ſaued a citie, as it happened to Rome, when the French men beſieged the Capitoll.

An order of  
Alcibiades  
for the deuy  
keping of  
wvatche and  
vvarde.

Alcibiades ſoꝝ to ſee, whether the warde watched, Athenſe being beſieged of the Spartaynes, oꝝdayned that when in the night, he ſhoulde liſte vp a light, all the warde ſhould liſt vp likewise, conſtituting puniſhmente to him that obſerued it not.

The ſecrete  
conueighing  
of letters.

Xerates of Athens killed a watcheman, which ſlept, ſaying, that he left him as hee ſounde him. Thoſe that haue bene beſieged, haue vſed diuers meanes, to ſende aduiſe to their friendes: and minding not to ſende their meſſage by mouth, they haue wꝛitten letters in Ciſers, and hiden them in ſundꝛie wiſe: the Ciſers be accoꝝding, as pleaſeth him that oꝝdaineth them, the maner of hiding them is diuers. Some haue wꝛitten within y ſcarberde of a ſwoꝝde: Other haue put the letters in an vn- baked loſe, & after haue baked the ſame, and giuen it foꝝ meate to him that caried them. Certain haue hidden the, in the ſecreteſt place of their bodies: other haue hiden them in the collour of a Dog, y is familiare with him, which carrieth the: Some haue wꝛitten in a letter oꝝdinarie thinges, & after betwene the one line & the other, haue alſo wꝛitē with water, that wetting it oꝝ warming it after, the letters ſhould appeare. This way hath bene moſt politikelly obſerued in our time: where ſome minding to ſignifie to their friendes inhabiting within a towne, thinges to be kept ſecret, & minding not to truſt any perſon, haue ſent common matters wꝛitten, accoꝝding to the common vſe and enterlined it, as I haue ſayde aboue, and the ſame haue made to be hanged on the gates of the Temples, the whiche by counterſignes bring knowne of thoſe, vnto whome they haue bene ſente, were taken of and reade: the whiche way  
is

is most politique, because he that carrieth them may be beguiled, and there shall happen him no perrill. There be moſte infinite other wayes, which euery man may by him ſelfe reade and finde: but with moze ſacilitie, the beſieged may be wꝛitten vnto, then the beſieged to theyꝛ frendes without, foꝛ that ſuch letters cannot be ſente, but by one, vnder colour of a ſogetine, that cometh out of a Towne, the which is a dangerous and perrillous thing, when the enemy is any whit crafty: But thoſe that ſende in, he that is ſent, may vnder many colours, go into the campe that beſiegeth, and from thens taking conueniente occaſion, may leape into the town: but let vs come to ſpeake of the preſente winning of Townes. I ſaye that if it happen, that thou be beſieged in thy Citie, which is not ordained with ditches within, as a littell befoꝛe we ſhewed, to minde that the enemy ſhall not enter thꝛoughe the breache of the walles, whiche the artillery maketh: becauſe there is no remedie to let the ſame from making of a breache, it is theretoꝛe neceſſary foꝛ thee, whileſt the ordinaunce battereth, to caſte a ditch within the walles whiche is battered, and that it be in breadth at leaſte two and twenty yardes and a halfe, and to thꝛolue all the ſame that is digged towardeſ the Towne, which may make a bancke, and the ditch moze deepe: and it is conueniente foꝛ thee, to ſollicitate this woꝛke in ſuche wiſe, that when the walles falleth, the Ditch may be digged at leaſt, ſolue oꝛ ſiue yardes in depth: the which ditch is neceſſary, while it is a digging, to ſhutte it on euery ſide with a ſlaughter houſe: and when the wall is ſo ſtrong, that it geneth thee time to make the ditch, and the ſlaughter houſes, that battered parte, cometh to be muche ſtronger, then the reſt of the citie: foꝛ that ſuch fortification, cometh to haue the ſoꝛme, of the ditches which we deuised within: but when thy wall is weake, & that it geneth thee not time, to make like fortifications, then ſtrength &

The defence  
againſt a  
breache.



## The ſeuenth Booke of

baliauntneſſe muſte be ſhewed, ſetting againſt the enemies armed menne, with all thy force. This maner of fortification was obſerued of the Hiſans, when you beſieged them, and they might doe it, becauſe they had ſtrong walles, which gaue them time, the yearth being ſoſte and moſt mate to rayſe by banckes, and to make fortifications: where if they had lacked this commoditie, they ſhoulde haue loſte the towne. Therefore it ſhall bee alwaies prudently done, to prouide aſoze hand making ditches within the Citie, and throughout all the circuite thereof, as a littel befoze we deuised: ſo; that in this caſe, the enemye may ſafely be taried ſo; at laiſure, the fortifications being redy made. The antiquity many times gotte townes, with muining vnder ground in two maners, eyther they made a way vnder ground ſecretely, which riſſe in the towne, and by the ſame entered, in which maner the Romaines toke the Citie of Cleienti, or; with the muining, they ouerthrew a walle, and made it ruinate: this laſte way is now a daies moſt ſtrong, & maketh, that the cities placed high, be moſte weake, becauſe they may better bee vnder muined: and putting aſter in a Caue of this Gunne powder, which in a moment kindeling, not onely ruinateth a wall, but it openeth the hilles, and vtterly diſſolueth the ſtrength of them.

Howe the  
antiquitie  
got townes  
by muining  
vnder ground

The remedie  
agaist caues  
or vnder  
muiniges

The remedie ſo; this, is to builde in the plaine, and to make the ditch that compaſſeth thy Citie, ſo deepe, that the enemye maye not digge lower then the ſame, where he ſhall not finde water, whiche onely is enemye to the Caues: ſo; if thou be in a towne, whiche thou defendeſt on a highe grounde, thou canſt not remedie it other wiſe, then to make within thy walles many deepe Welles, the which be as downers to the ſame Caues, that the enemye is able to ordaine againſt thee. An other remedie there is, to make a Caue againſt it, when thou ſhouldeſte bee aſware where he muineth, the whiche waye eaſelye hindereth him, but difficultly  
it

*the Arte of Warre Fol. Cii.*

It is forſene, being beſieged of a craftie enemy. **¶** He that is beſieged, oughte aboue all thinges to haue care, not to be oppreſſed in the time of reſte: as is after a battaile foughte, after the watche made, whiche is in the ſpoorning at breake of the daye, and in the Euening betwene daie and night, and aboue all, at meale times: in whiche time many Townes haue bene wonne, and armies haue bene of them within ruinated: therefore it is requiſite with diligence on all partes, to ſtande alwaies gardeo, and in a good parte armed. I wil not lacke to tell you, howe that, which maketh a Citie or a campe difficult to be defended, is to be diuened to keepe ſundred all the force, that thou haſte in them, for that the enemy being able to aſſaulte thee at his pleaſure altogether, it is conueniente for thee on euery ſide, to garde euery place, and ſo he aſſaulteth thee with all his force, and thou with parte of thine defendeſt thee. Alſo, the beſieged may be overcome altogether, he without cannot be, but repulſed: wherefore many, whome haue bene beſieged, either in a Campe, or in a Towne, althoughe they haue bene inferioure of power, haue iſſued oute with theyr men at a ſodaine, and haue overcome the enemy. This Marcellus of Pola did: this did Ceſar in fraunce, where his campe being aſſaulted of a moſt great nũber of frenchmen, and ſeing him ſelfe not able to defende it, being conſtrayned to diuide his force into many partes, and not to be able ſtanding within the Liſtes, with violence to repulſe the enemy: he opened the Campe on the one ſide, and turning towarde the ſame parte with all his power, made ſo much violence againſt them, and with ſo much valiantnes, that he vanquiſhed and overcame them. The conſtancie alſo of the beſieged, cauſeth many times diſpleaſure, and maketh aſſayde them that do beſiege. Pompei being agaynſt Ceſar, and Ceſars armie being in greate diſtreſſe throughe famine, there was broughte of his breade to Pompei, whome ſeing it made

Vvhat care  
the beſieged  
oughte to  
haue.

Vvhat ma-  
keth a citie  
or campe diffi-  
culte to bee  
defended.

By vvhath  
meanes thei  
that beſiege  
are made a-  
ſſayde.

## *The ſeuenth Booke of*

made of graſſe, commaunded, that it ſhould not bee ſhelved  
vnto his armie, leaſt it ſhould make them afraid, ſeing  
what enemies they had againſt them. Nothing cau-  
ſed ſo much honour to the Romans in the warre of A-  
niball, as they: conſtancie: for as much as in what ſo e-  
uer enuious, and aduerſe fortune they were troubled,  
they neuer demanded peace, they neuer made anye  
ſigne of feare, but rather when Aniball was aboute  
Rome, they ſolde thoſe fieldes, where he had pitched  
his Campe, dearer then ordinary in other times ſhould  
haue bene ſolde: and they ſtoode in ſo much obſtinacie  
in they: enterprizes, that for to defende Rome, they  
would not raiſe they: campe from Capua, the which in  
the very ſame time that Rome was beſieged, the Ro-  
maines did beſiege.

Honour got  
by conſtancie

I knowe that I haue tolde you of many thinges, the  
which by your ſelf you might haue vnderſtoode, & conſide-  
red, notwithstanding I haue done it (as to day alſo I haue  
tolde you) for to be able to ſhelue you better by meane  
thereof, the qualitie of this army, and alſo for to ſatisfie  
thoſe, if there be anye, whome haue not had the ſame  
commodity to vnderſtand them as you. For me thinkes  
that there reſteth other to tell you, then certaine general  
rules, the which you ſhall haue moſte familier, whiche  
be theſe.

Rules of  
vvaire.

The ſame that helpeth the enemy, hurteth thee: and  
the ſame that helpeth thee, hurteth the enemy.

He that ſhal be in the warre moſt vigilant to obſerue  
the deuices of the enemy, and ſhall take moſte paine to  
exerciſe his army, ſhall incurre leaſt perills, and maye  
hope moſt of the victorie.

Neuer conduced thy men to fight the field, if firſt thou  
haſt not confirmed they: mindes & knoweſt them to be  
without feare, & to be in good order: for thou oughteſt ne-  
uer to enterpriſe any dangerous thing with thy ſouldi-  
ours, but when thou ſeeſt, that they hope to overcome.



*the Arte of Warre Fol. Ciiii.*

It is better to conquere the enemy with famine, then with yron: in the victorie of which, fortune may do much more then valiantnesse.

No purpose is better then that, which is hidde from the enemy vntill thou haue executed it.

To knowe in the warre howe to vnderstande occasion, and to take it, helpeth more then any other thing.

Nature breedeth fewe strong men, the industrie and the exercise maketh manye.

Discipline maye do more in warre, then furie.

When anye departe from the enemies side so2 to come to serue the, when they be faithfull, they shalbe vnto the alwaies great gaines: so2 that the power of the aduersaries are more diminished with the losse of them, that runne awaye, then of those that be slayne, although that the name of a fugiue be to newe friends suspected, to olde odious.

Better it is in pitching the fiede, to reserue behinde the first front ayde ynoughe, then to make the front bigger to disperse the souldiours.

He is difficultlye overcome, whiche can knowe his owne power and the same of the enemy.

The valiauntnesse of the souldiours auayleth more then the multitude.

Some times the situation helpeth more then the valiantnesse.

Newe and sudden thinges, make armyes asfayde.

Slowe and accustomed thinges, be litle regarded of them. Therefore make thy arminge to practise & to knowe with small fighthes a newe enemye, before thou come to fight the fiede with him.

He that with disorder followeth the enemye after that he is broken, will do no other, then to become of a conquerour a loser.

He that prepareth not necessarye victualles to liue vpon, is overcome without yron.

He

## *The ſeuenth Booke of*

He that truſteth moze in hoꝛſemen then in foteſmen, or moze in foteſmen then in hoꝛſemen, muſt accommo-  
date him ſelfe with the ſituation.

When thou wilt ſee if in the daye there bee comen  
anye ſpie into the Campe, cauſe euery man to go to his  
lodging.

Change purpoſe, when thou perceiueſt that the ene-  
mie hath forſene it.

Howe to  
conſulte.

Conſult with many of thoſe thinges, which thou ough-  
teſt to do: the ſame that thou wilt after do, conferre with  
ſeue.

Souldiours when they abide at home, are maintay-  
ned with feare and puniſhmente, after when they are  
lead to the warre, with hope and with rewarde.

Good Capitaynes come neuer to fighte the ſielde, ex-  
cept neceſſitie conſtrayne them, and occaſion call them.

Cauſe that the enemies knowe not, howe thou wilt  
order thy army to fight, and in what ſo euer maner that  
thou orderneſt it, make that the firſte bande maye bee  
receyued of the ſeconde and of the thirde.

In the fighte neuer occupie a battaill to anye other  
thing, then to the ſame, for whiche thou haſt apointed it,  
if thou wilt make no diſorder.

The ſodayne accidentes, with difficultie are reme-  
died: thoſe that are thought vpon, with facilitie.

Pen, yron, money, and bread, bee the ſtrength of the  
warre, but of theſe ſoure, the firſt two be moſte neceſſa-  
rye: becauſe men and yron, finde money and bread: but  
breade and money finde not men and yron.

What  
thinges are  
the ſtrength  
of the warre

The vnarmed rich man, is a bootie to the poore ſoul-  
dier.

Accuſtome thy ſouldiours to diſpiſe delicate liuing and  
laciuous apparell.

This is as muche as happeneth me generallye to re-  
member you, and I knowe that there might haue bene  
ſayde manye other thinges in all this my reaſoning:

as

as should be, how and in howe many kinde of waies the antiquitie ordered their bandes, howe they apparelled them, and howe in many other thinges they exercised them, and to haue ioined herevnto many other particulars, the which I haue not iudged necessary to shew, as wel for that you your selfe maye see them, as also for that my intente hath not been to shew iuste how the olde seruice of warre was appointed, but how in these daies a seruice of warre might be ordained, which shoulde haue moze vertue then the same y<sup>e</sup> is vsed. Wherefoze I haue not thought good of the auncient thynges to reaso<sup>n</sup> other, then y<sup>e</sup>, which I haue iudged to such introduction necessary. I know also that I might haue delated moze vpon the seruice on horsebacke, and after haue reasoned of the warre on the Sea: for as much as he that distinguisheth the seruice of warre, sayeth, howe there is an armie on the sea, and of the lande, on foote, & on horseback. Of that on the sea, I wyl not presume to speake, for that I haue no knowledge thereof: but I will let the Venetians, and the Meneicians speake thereof, whome with like Indies haue heretofore done greate thinges.

Also of horses, I will speake no other, then as afore I haue sayde, this parte being (as I haue declared) leaste corrupted. Besides this, the footemen being well ordained, which is the puissance of the armie, good horses of necessitie will come to be made.

Wherby I counsell him that woulde ordayne the exercise of armes in his owne countrey, and desireth to fill the same with good horses, that he make tw<sup>o</sup> provisions: the one is, that he distribute Mares of a good race throughe his dominion, and accustome his menne to make choise of coltes, as you in this countrey make of Calues and Pulcs: the other is: that to thentente the excepted might finde a byer, I would prohibet that no man shoulde keepe a Mule excepte he woulde keepe a horse: so that he that woulde keepe but one beaste to ride

*Provisions  
that maye be  
made to fill a  
Realme full  
of good  
horses.*



## *The seventh Booke of*

ride on, shoulde be constrained to keepe a horse: & moze, euer that no man shoulde weare fine cloathe except he which doeth keepe a horse: this order I vnderstande hath bene deuised of certaine Princes in oure time, whome in shorte space haue thereby, brought into theyr countrey an excellent number of good horses. Aboute the other thinges, as much as mighte be looked for concerning horse, I remitte to as much as I haue sayde to daye, and to that which they vse. Peraduenture also you would desire to vnderstand what condicions a Capitaine ought to haue: wherof I shall satisfie you moste briefly: for that I cannot tell howe to chose any other man then the same, who shoulde knowe howe to do all these thinges which this daye hath bene reasoned of by vs: the which also shoulde not suffice, when he shoulde not knowe howe to deuise of him selfe, for that no man without inuencion, was euer excellent in any science: and if inuencion causeth honour in other thinges, in this aboute all, it maketh a man honozable: for euery inuencion is sene, althoughe it were but simple, to be of wyters celebrated: as it is sene, where Alexander Magnus is praysed, who for to remoue his Campe most secretlye, gaue no twarning with the Trumpette, but with a batte vpon a Lance. And was praysed also for hauing take order that his souldiours in buckeling with the enemies, shoulde kneele with the left legge, to be able moze strongly to withstand their violence: & which hauing geuen him the victozy, it got him also so much praise, that al the Images, which were erected in his honour, stode after the same fashio. But because it is time to finishe this reasoning, I will turne agayne to my first purpose, and partly I shall auoide the same reppoche, wherin they vse to cendempne in this towne, such as knoweth not when to make an ende.

The know-  
ledge that a  
capitaine  
ought to  
haue,

The author  
retourneth  
to his first  
purpose and

If you remember Cosimus you tolde me, that I  
being of one side an exalter of the antiquitie, and a dis-  
praiser

*the Art of Warre Fol. Cvi.*

praiser of those, which in waightie matters imitated the  
not, and of the other side, I hauing not in the affaires of  
warre, wherein I haue taken paine, imitated them, you  
could not perceiue the occasion: wherunto I answered,  
howe that men which will do any thing, must first pre-  
pare to knowe howe to do it, so2 to be able, after to vse  
it, when occasion permitteth: whether I do knowe how  
to bying the seruice of warre to the aunciente maners or  
no, I will be iudged by you, which haue heard mee vpon  
this matter long dispute: whereby you may know,  
howe much time I haue consumed in these studie: and  
also I beleue that you maye imagine, howe much de-  
sire is in mee to bying it to effect: the whiche whether I  
haue bene able to haue done, or that euer occasion hath  
bene giuen mee, most easly you maye coniecture: yet  
so2 to make you moze certayne and so2 my better iusti-  
fication, I will also aledge the occasions: and as muche  
as I haue promised, I will partly performe, to shew you  
the difficultie and the facilitie, which be at this present  
in suche imitations.

Wherefoze I say, howe that no deede that is done now  
a dayes among men, is moze easly to be reduced into  
the aunciente maners, then the seruice of Warre: but  
by them onely that be Princes of so muche state, who  
can at least gather together of their owne subiectes. xv.  
or twentie thousande young men: otherwise, no thing  
is moze difficulte, then this, to them whiche haue not  
suche commoditie: and so2 that you maye the better vn-  
derstande this parte, you haue to knowe, howe that  
there be of two condicions, Capitaynes to be pray-  
sed: The one are those, that with an army ordayned  
throughe the naturall discipline thereof, haue done  
greate thinges, as were the greater parte of the Ro-  
mayne Citezins, and suche as haue lead armyes,  
the whiche haue had no other paine, then to mayntayne  
them good, and to see them guyded safely: the other are

maketh a li-  
tle discourse  
to make an  
end of his  
reasoning.

A prince  
maye easly  
bring to in-  
tiere perfec-  
tion the ser-  
uice of warre.

Two sortes  
of capitains  
worthie to  
be praised.

Do. ii. they,

## *The seventh Booke of*

they, whiche not onely haue had to ouercome the enemye, but befoze they come to the same, haue bene constrained to make good and well ordered their armyes: who without doubt deserve muche moze praise, then those haue deserved, whiche with old armies, and good, haue valiauntly wrought. Of these, such were Pelopida, and Epaminonda, Tullus Hostilius, Philip of Macedony father of Alexander, Cyrus king of the Persians Gracchus a Roman: they all were dyuen first to make their armies good, and after to fight with them: they all coulde do it, as well throught their prudence, as also for hauing subiectes whome they mighte in like exercises instruct: no: it shoulde neuer haue bene otherwise possible, that anye of them, though they had bene neuer so good and full of all excellencie, shoulde haue bene able in a straunge countrey, full of men corrupted, not bled to any honest obedience, to haue brought to passe any laudable worke. It suffiseth not then in Italie, to knowe how to gouerne an armie made, but firste it is necessary to knowe howe to make it, and after to knowe howe to commaunde it: and to do these thinges, it is requisite they be those Princes, whom hauing much dominion, and subiectes ynough, may haue commoditie to do it: of which I can not be, who neuer commaunded, no: can not commaunde, but to armies of straungers, and to men bounde to other, and not to mee: in whiche if it be possible, or no, to introduce any of those thinges that this daye of mee hath bene reasoned, I will leaue it to your iudgement. Albeit when coulde I make one of these souldiours which now a dayes practise, to weare moze armour then the ordinarie, and besides the armour, to beare their owne meate for two or thre dayes, with a mattocke? When coulde I make them to digge, or keepe them euery day many howers armed, in fained exercises, for to be able after in the very thing in dede to prouaile? When woulde they abstayne from playe, from  
laciui



laciniousnesse, from swearing, from the insolence, whiche every daye they commit: when woulde they be reduced into so much discipline, into so much obedience and reuerence, that a tree full of apples in the middle of their Campe, should be founde there and leste vntouched: As is red, that in the aunciente armies manye times happened. What thing maye I promise them, by meane wherof they may haue mee in reuerence to loue or to feare, when the warre being ended, they haue not anye more to doe with mee: wherof maye I make them ashamed, which be borne & brought vp without shame: why should they be ruled by mee who knowe mee not: By what God or by what saintes may I make them to sweare: By those y they worship, or by those that they blaspheme: Who they worship I knowe not anye: but I know well they blaspheme all. Howe should I beleue that they will keepe their promise to them, whom every howe they dispise: Howe can they that dispise God, reuerence men: When what good fashion should be, which might be imprinted in this matter?

And if you should alledge vnto mee that Swizzers and Spaniardes be good shouldours, I woulde confesse vnto you, howe they be farre better then the Italians: but if you note my reasoning, and the maner of proceeding of both, you shall see, howe they lacke manye thinges to ioine to the perfection of the antiquitie.

And howe the Swizzers be made good of one of their naturall vses caused of that, whiche to daye I tolde you: those other are made good by meane of a necessitie: for that seruing in a straunge countrie, and seeming vnto them to be constrained either to dye, or to ouercome, they perceiuing to haue no place to flye, doe become good: but it is a goodnesse in manye partes faultye: for that in the same there is no other god, but that they be accustomed to farie the enemy at the Pike and swordes pointe: nor that, whiche they lacke, no man

## *The ſeuenth Booke of*

man ſhoulde bee meete to teache them, and ſo muche the leſſe, bee that coulde not ſpeake their language.

The author  
excuſeth the  
people of I-  
talie to the  
great repro-  
che of their  
princes for  
their igno-  
raunce in  
the affaires  
of vvaie.

But let vs tourne to the Italians, who ſo hauing not had wiſe Princes, haue not taken any good order: and ſo hauing not had the ſame neceſſitie, whiche the Spa- niardes haue had, they haue not taken it of them ſelues ſo that they remayne the ſhame of the worlde: and the people bee not to blame, but onelye their princes, who haue bene chaſtiſed, and ſo their ignoraunce haue been iuſtly puniſhed, leſſing moſt ſhamefullye their ſtates, without ſhewing anye vertuous enſample. And if you will ſee whether this that I ſaye be true: conſider howe manye warres haue bene in Italy ſince the departure of king Charles to this daye, where the warre being wont to make men warlike and of reputation, theſe the greater and fierſer that they haue bene, ſo muche the moze they haue made the reputation of the members and of the heades therof to bee loſt. This proueth that it groweth, that the accuſtomed orders were not no: bee not good, and of the newe orders, there is not any which haue knowen howe to take them. For neuer beleue that reputation will be gotten by the Italians weapons, but by the ſame waye that I haue ſhewed, & by meanes of them, that haue great ſtates in Italic: ſo that this forme maye bee impreſſed, in ſimple rude men, of their owne, and not in malicious, ill brought vp, and ſtrangers. For there ſhall neuer bee founde any good maſon, whiche will beleue to bee able to make a faire image of a peece of Marble ill hewed, but verye well of a rude peece.

A diſcriptio  
of the foliſh  
neſſe of the  
Italia prin-  
ces.

Our Italian Princes beleued, beſore they taſted the blowes of the oullandſhe warre, that it ſhoulde ſuffice a Prince to knowe by wytinges, howe to make a ſub- tell aunſwere, to wyte a goodly letter, to ſheke in ſay- inges, and in wordes, witte and prompteneſſe, to knowe howe to canuaſe a fraude, to decke them ſelues with

with precious stones and gold, to sleepe and to eate with greater gloze then other: To keepe many lasciuious persons aboute them, to gouerne them selues with their subjects, conuentionally and proudeley: To rote in idleness, to geue the degrees of the exercise of warre, for good will, to despise if any should haue shewed them any laudable waye, minding that their wordes should be answers of oracles: no; the self wretches were not aware that they prepared them selues to be a praye to whome so euer should assaulte them. Hereby grewe then in the thousand folwe hundred and nintie and folwe yere, the greates feares, the sobaine flightes, and y marucilous losses: and so thre most mighty states which were in Itallie, haue bene diuers times sacked and destroyed. Not that which is worse, is where these y remaine, continue in the very same erreure, and liue in the verie same disorder, & consider not, that those, who in olde time would keepe their states, caused to be done these thinges, which of me hath bene reasoned, and that their studies were, to prepare the body to diseases, & the minde not to feare perills. Whereby grewe that Cesar, Alexander, and all those men and excellent Princes in old time, were the foremost amongest the fighters, going armed on foot: and if they losse theyr state, they would lose their life, so that they liued and died vertuously. And if in them, or in parte of them, there might be condemned to much ambition to reason of: yet there shall neuer be founde, that in them is condemned any tendernesse, or any thing that maketh men delicate and feeble: the which thing, if of these Princes were redde and belueed, it should be impossible, that they should not chaunge their forme of liuing, and theyr prouinces not to chaunge fortune. And for that you in the beginning of this oure reasoning, lamented youre ordinaunces, I saie vnto you, that if you had ordained it, as I also haue reasoned, & it had geuen of it selfe no good experience, you mighte  
with

Cesar & Alexander,  
were the  
formost in  
battell.



## *The ſeuenth Booke of*

With reaſon haue bene grieved therewith: but if it be not ſo ordayned, and exerciſed, as I haue ſaide, it maye be grieved with you, who haue made a counterſaite thereof, and no perfecte figure. The Clencians alſo, and the Duke of Ferrare, began it, and followed it not, the which hath bene through their faulte, not through their merit. And therfore I aſſure you, that who ſo euer of theſe, which at this daye haue ſtates in Italye, ſhall enter firſt into this waye, ſhall be firſt, beſore anye other, Lord of this Province, and it ſhall happen to this ſtate as to the kingdome of the Macedonians, the which coming vnder Philip, who had learned the maner of ſetting armies in order of Epaminondas a Thebane, became with this order, and with theſe exerciſes (whileſt the reſt of Greece ſtoode in idleneſſe, and attended to reſiſte commedes) ſo puiſſaunt, that he was able in ſewer yeres to poſſeſſe it all, and to leaue ſuche foundation to his ſonne, that he was able to make himſelfe, prince of all the worlde. He then that deſpiſeth theſe ſtudies, if he be a Prince, deſpiſeth his Princedom: if he be a Citizen, his Citie. Wherefore, I lamente mee of nature, the which either ought not to haue made mee a knower of this, or it oughte to haue giuen mee power, to haue bene able to haue executed it: For nowe being olde, I cannot hope to haue any occaſion, to be able ſo to doe: In conſideration wherof, I haue bene liberall with you who bring graue young men, maye (when the thinges ſayde of mee ſhall pleaſe you) at due times in fauoure of your Princes, helpe them and counſaile them, wherein I would haue you not to be aſrayde, or miſtruſtfull, becauſe this Province ſeemes to be altogether giuen to raiſe vp againe the thinges deade, as is ſcene by the perfection that Poetrie, painting, and wryting, is now brought vnto: Albeit, as muche as is looked for of mee, being ſtrucken in yeres, I do miſtruſt. Where ſurely, if Fortune had heretofore graunted mee ſo muche

Rate.

The venetians and the duke of Ferrare began to haue reduced the warre to the ancient maners

he that deſpiſeth the ſeruis of warre, deſpiſeth his owne welth.

*The seventh Booke Fol. Cix*

state, as sufficeth for a like enterprise, I would not haue  
doubted, but in moſte ſhozte time, to haue ſhewed to the  
worlde, howe muche the aunciente orders auail:  
and without peraduenture, either I would  
haue increaſed it with glozy, or  
loſt it without ſhame.

*The ende of the ſeuenth and laſte booke of the arte of  
warre, of Nicholas Machiauel, Citezen and  
ſecretarie of Florence, tranſlated out  
of Italian into Engliſhe: By  
Peter Whitehorne,  
ſelow of Graiſe  
Iune.*

C.e.i.

Nicholas

# ¶ *Nicholas Machiauel , Citezein*

And Secretarye of Florence , to  
the Readers.



O the intente that such as reade this booke  
maye withoute difficultie vnderstand the  
order of the battailes, or bandes of men,  
and of the armyes, and lodgings in the  
Campe, according as they in the discripti-  
on of them are appointed, I thinke it necessary to shew  
you the figure of euerie one of them: wherefore it is re-  
quisit firste, to declare vnto you, by what pointes and  
letters, the footemen, the horsemen, and euery other per-  
ticuler member are set forth.

## *Knowe therefore that*

•		Target men.	
e		Pike men.	
v		a Capitaine of ten men.	
v		Veliti a ordinarie.	} which are those me that shote with harkabus les & bowes.
r		Veliti extraordinari	
C		a Centurion or cap- tayne of hundred men.	
k		a Constable or a capitaine of a bande of foure hundred and fiftie men.	
H	} Signifieth	The head captain of a maine battaile.	
G		The general Capitaine of the whole armie.	
t		The Trompet.	
d		The Drum.	
b		The Ansigne.	
f		The Standerde.	
m		Men of Armes.	
l		Light horsemen.	
A		Artillerie or ordnance.	



110  
In the firste figure nexte following, is described the forme of an ordinary battaile or band of foure hundred and fiftie men, and in what manner it is redoubled by flanke. And also howe with the very same order of. lxxx. ranckes, by chaunging onely to the hinder parte the five ranckes of Pikes whiche were the foremoste of every Centurie, they maye likewise in bringing them in battaile raie, come to be placed behinde, whiche maye be done, when in marching, the enemies should come to assaulte them at theyr backs: according as the ordering thereof is before declared. fol. xxxij. fol. xxxv

In the seconde figure, is shewed howe a battaile or bande of men is ordered, whiche in marching should be giuen to fighte on the flanke: according as in the booke is declared. fol. xxxv.

In the thirde figure, is shewed howe a battaile or bande of menne, is ordered with two hoynes, fol. xxxv. and after is shewed howe the same maye be made with a boyde place in the middeste: according as the ordering thereof, in the booke moste plainely is declared. fol. xxxvi.

In the fourthe figure, is shewed the forme or fashion of an armie appointed to fighte the battaile with the enemies: and for the better vnderstanding thereof, the very same is plainelie set forth in the figure next vnto it, where by the other two figures nexte following maye the easier be vnderstode: according as in the booke is expessed. fol. xliij.

In the fiftie figure, is shewed the forme of a foure square armie: as in the booke is described. fol. lxvii.

In the sixte figure, is shewed howe an Armie is broughte from a fouresquare fashion, to the ordinary forme, to fighte a fielde: according as afore is declared. fol. lxix.

In the seuenthe figure, is described the manner of incamping: according as the same in the booke is declared. fol. lxxviii.

figure.

C

This is the  
maner of or  
dering of  
CCCC. me  
into, lxxx.  
ranckes, fiue  
to a rancke,  
to bring the  
into a foure  
square bat-  
taile vvith  
the pikes on  
the front, as  
after fol-  
loweth.

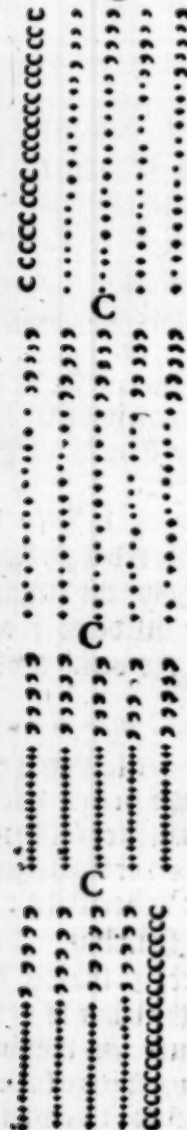
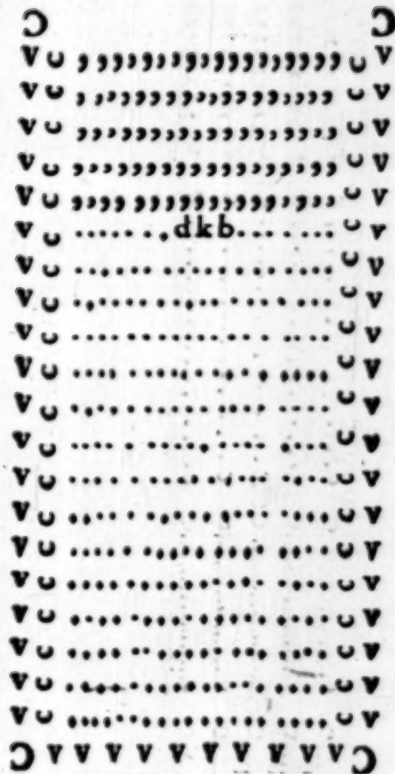


figure: 11



This is the  
forſaid. lxxx  
rāckes of. iiii  
C. men brou  
ghte into a  
fourſquare  
battel, vvith  
the pikes on  
the fronte.  
And the. L.  
Velitie on  
the ſides and  
on the back.



## The seconde

This is the  
maner of or  
dering of.  
CCCC. me  
into. lxxx.  
ranckes, siue  
to a rancke,  
to bring the  
into a. iiii.  
square bat-  
taile vvith  
the pikes on  
the side, as  
after fol-  
loweth.



figure.

112



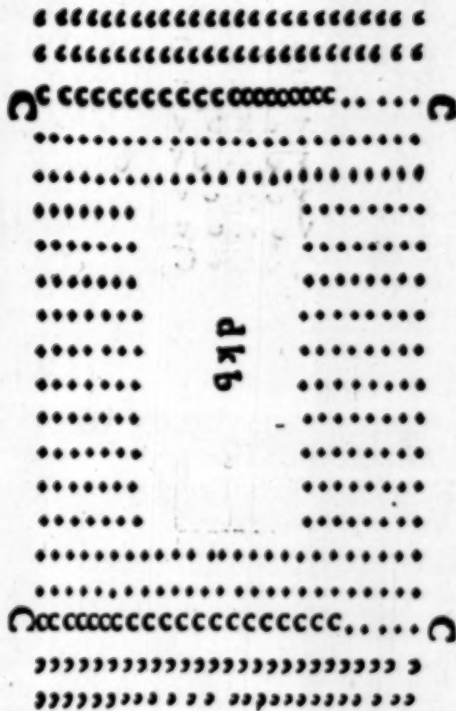
This is the  
forefaide.  
lxxx. rankes  
of .iiii. C. m<sup>e</sup>  
brought in-  
to a four-  
square bat-  
taile vvith  
the Pikes  
on the side.





figure.

113



113

## THE FOURTH

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**The carriages and**

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the bargained.

३१.६

*THE SIXT*

[illegible]



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116

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THE SIXT

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vvvr u.. rr u.. rr u.. rr u.. rr u..  
vvvr u.. rr u.. rr u.. rr u.. rr u..  
vvv C3 u.. CC u.. C3 u.. C3 u.. C3 u..  
vvv C3,,, C3 u.. C3 u.. C3 u.. C3 u..

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vvvr, , , , , r  
vvv, , , , , C  
vvv, , , , , C  
vvvr, , , , , r  
vCr, dkb, r

r,,,..r  
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f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z  
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 a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z  
 A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z

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the seventh

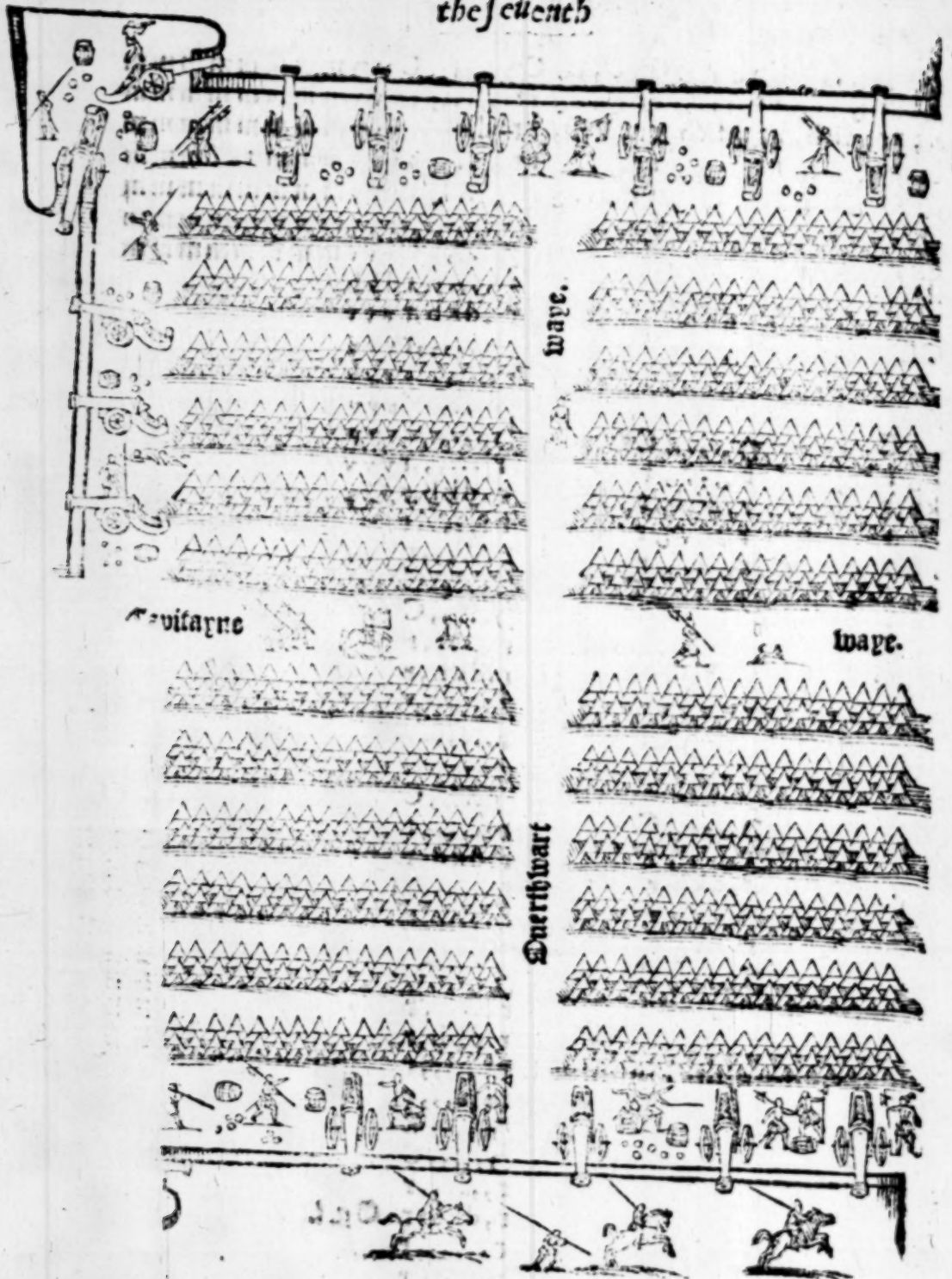
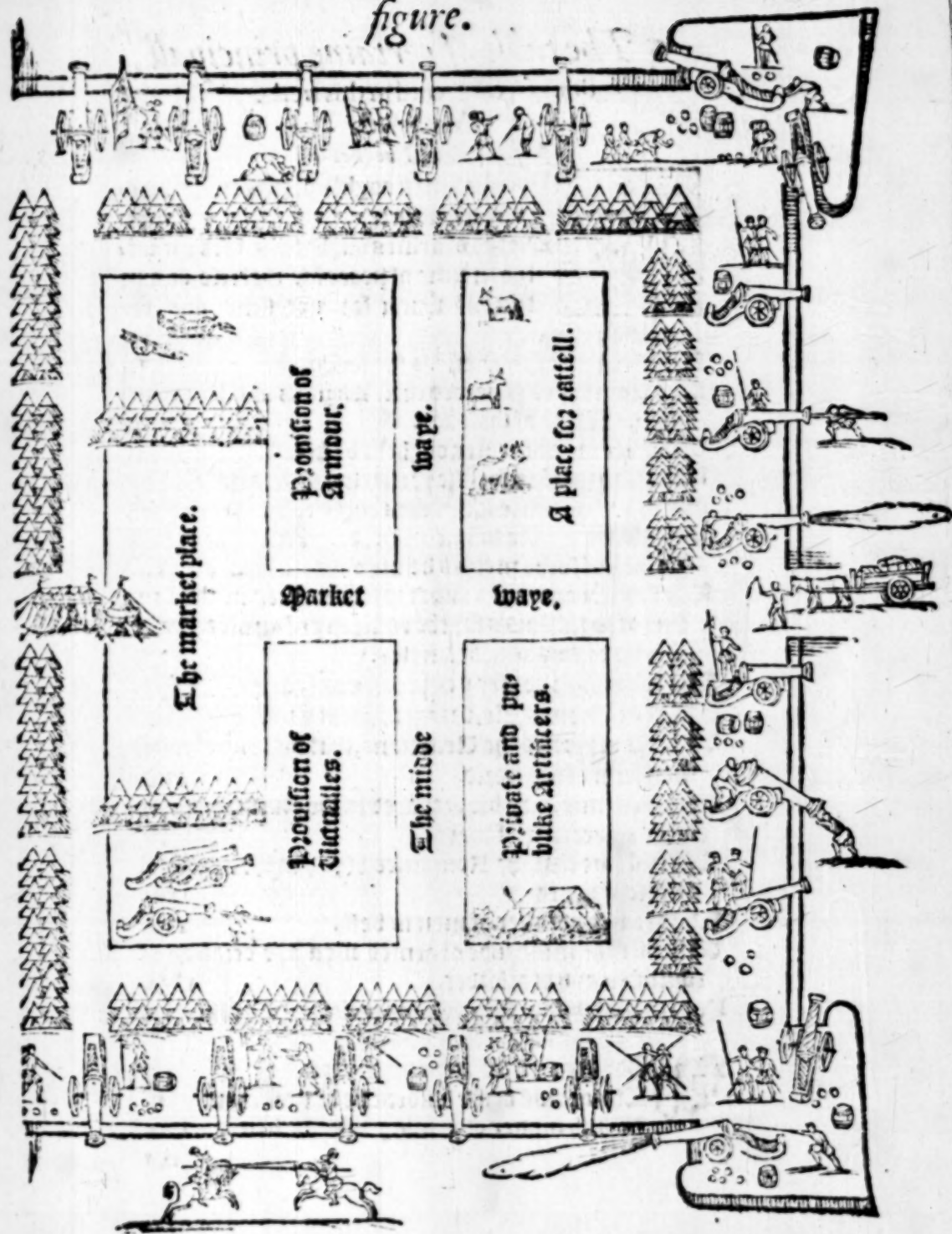




figure.



# ¶ The table of certaine principall

things, contayned in this worke

of Machiauel,

¶ In the First booke.



By a good man ought not to exercise warre  
fare as his arte. fol. vi.

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The strength of an armie is the souldiers.  
The Romaynes renewed their Legions and had men  
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Out of what countrey souldiers ought to be chosen. xi. xii.

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Monarchi of the world. xiiij.

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What armour the antiquitie vsed. xx.

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*The ende.*



**CERTAINE**  
vwayes for the ordering of  
*Souldiours in battelray, and setting*  
of battayles, after diuers fashions, with  
their maner of marching: And also figures  
of certayne newe plattes for fortifica-  
tion of Townes: And moze ouer,  
howe to make Saltpeter,  
Gunpowder, and di-  
uers sortes  
of Fireworkes or wilde fyre,  
with other thinges ap-  
pertayning to the  
warres. Ca-  
thered &  
set  
forth by Peter VVhitchorne.

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¶ *Imprinted at London by*  
VV.VVilliamson: for  
Ihon VVight.

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*Anno. 1573.*

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*A perfecte rule to bring men into*

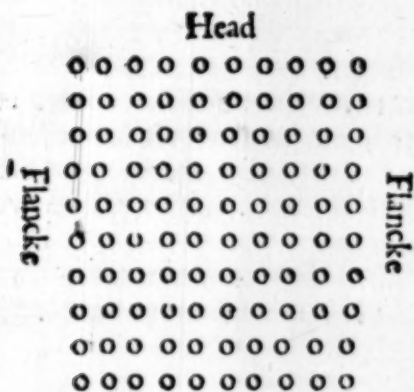
a square battell, of what number so euer they be.

Cap.i.



Or to make a square Battell of a number of men, or of an Armie, the fowresquare roote or Quadyante number of them, muste be taken, and so manye as the same roote contaynes, so manye oughte to be set in aray. As for example in a littell number,

for the better vnderstanding thereof: Admitte there be a .100. men, the fowresquare roote of .100. ought to be taken oute, which is tenne: Then putting tenne of these men in a rancke, there will be tenne ranckes, ten to a rancke. Whiche tenne ranckes placing them ordinarye, the one behinde the other, so that all the distances that shall be betwene man and man, as well on the sides, as before and behinde be equall, suche .100. menne will make a fowresquare battaile, as by the figure here following appeareth.

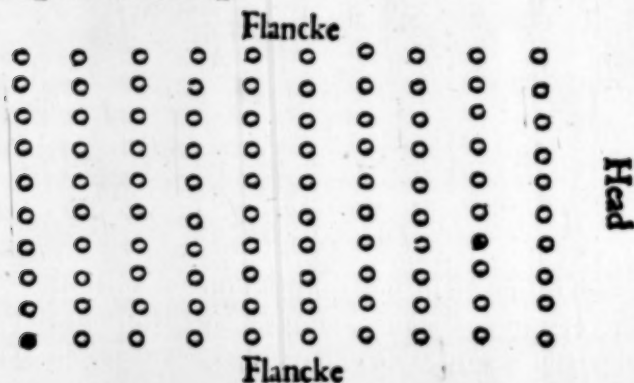


A.ij.

But

## The ordering of Souldiours

But for that men ordered in battelraye, stande not, nor marche not, as aboue is supposed, I meane in equall distaunce, for that euery man (as Vegetius affirmeth) would haue for largenesse thre fote, that is from shoulder to shoulder, and for lengthe seuen fote, that is thre fote befoze him, and thre fote behinde him, and one fote that his owne person will occupye, for whiche cause the aboue witten order, menne standing according to the sayde ordinarie, distancer, shall not be a iuste souldiersquare, but the lengthe thereof shall be .70. fote, and the bredthe .30. fote, as appeareth by the figure following.



And where some number of men commeth not after suche sorte to be souldiersquare, as .200. the roote whereof is .14. although there be .4. ouerplus: in this case there ought to be put fouretene in a ranke, & the sayd battaile will come neuerthelesse to be souldiersquare: That is, it shall be of .14. ranckes of menne .14. to a rancke, and as for those souldiers that are ouerplus out of the araye, the sergant maye place eyther in the taile thereof, or elles where seemes him best oute of that order:

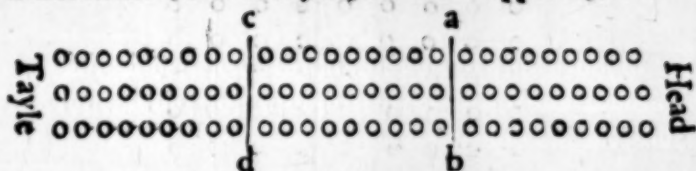
Likewise after this manner, an army of men howe greate a number so euer it be, maye be broughte into a souldiers

foresquare, as for example, admitte there were an army of .35000. of these .35000. menne, the foresquare roote is to be taken oute, according to the order that I haue declared before, and the same shall be founde to be .187. and .31. menne remayning querplus, so that placing .187. menne in a rancke, suche an army will be in fashion foresquare, that is, it will amounte vnto 187. ranckes .187. menne for a rancke. And as for the 31. odde men, the Capitaine may appointe where he shall thinke good.

To knowe howe many men maye marche in a rancke, and at a sudden to bring them into a foresquare battaile, so that their Ansigne, may come to be in the middest, Cap. 2.



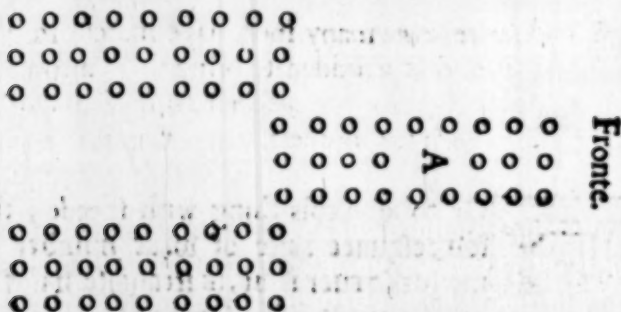
Or to doo this thing with speede, the foresquare roote of what number of menne so euer it be, is straights waye to be taken: and if the same roote be so that it maye be equally devided into thre, so many as shall be the thirde parte of that roote, so many of the saide menne for a rancke oughte to marche by the waye. As for example, if the men that are to be conducted, be .81. the roote of those .81. myghte be taken, the which is .9. And for as muche as the roote of this may equally be devided into .3. and the thirde parte thereof being .3. the sayde .81. menne must therfore be made to marche in ioyneing thre in a rancke, and they shall make in all .27. ranckes, as here vnder appereth.



And when nede is that they muste bee broughte into a foresquare battaile, all these 27. ranckes would be devided

## *The ordering of Souldiours*

deuided into thre equall partes, as is declared by a b. and c d. So that to every parte there come to remayne 9. ranckes, thre men in a rancke, and afterwarde the firste parte that is in the fronte must be caused to stay, and the other twaine to procede forwarde, the one on the righte hande, and the other on the lefte hande of the firste (now standing still) untill the heade of fronte of eyther of the saide two partes doe unite or come to be euen with the heade of the firste, and there to stay. As by the figure following may be vnderstande.



The whiche thre partes thus broughte and ordered, shall make a sokesquare battaile, as appeareth by this figure following: and to cause that the Ansigne doe fall in the midst of such a battaile, alwayes it oughte to be placed in the midst of the firste parte, as befoze appeareth in the pointe. A.



But



But to knowe howe to deuide the sayde. 27. ranckes into thre equall portions without standing to tell nyne ranckes, considering that if it were a great number of men, it should be a thing very long so to do: therfore seeing that to euery number of men, there is commonly placed a rancke of Harkabutters or Bowemen in the forewarde, & an other in the Rerewarde, in this figure aboue wrytten of foure scoze men and one, there would be 18. Harkabutters: that is 9. in the forewarde, and 9. in the Rerewarde: and setting two ranckes of Harkabutters in the places where the diuisions are to be made, as hereafter appeareth in figure, vnderstanding the Harkabutters by this letter H.

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H OOOOOOOO H H OOOOOOOO H H OOOOOOOO H
H OOOOOOOO H H OOOOOOOO H H OOO >OOO H
H OOOOOOOO H H OOOOOOOO H H OOOOOOOO H
  
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By those Harkabutters you maye alwayes vnderstande where the diuisions are to be made of the sayd 27. ranckes, and likewise in euery other greater number. And when suche a rote cannot be deuided into thre equall partes, of necessitie there must remayne ouer one or two. Now let vs firste take for example this, where remayneth ouer one, as it should be if it were a hundred men, the rote whereof is tenne, which tenne deuided into thre, commeth to thre times thre, and one remayning ouerplus. Wherefore there muste be made tenne ranckes to march thre and thre (that is so many ranckes as the number of the rote is of) and other tenne ranckes foure & foure together, and the last. 10. ranckes also thre & thre together: as here folowing appeareth with their 20. Harkabutters or Bowemen, besides the saide hundred men.

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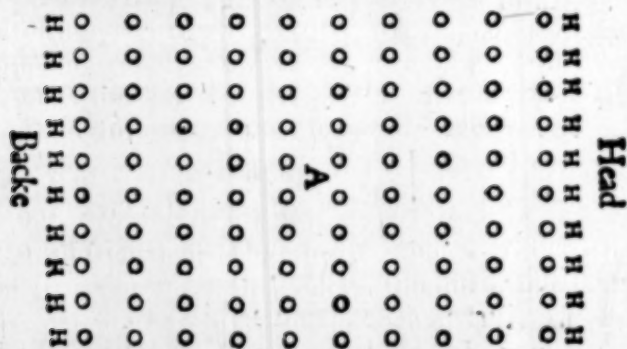
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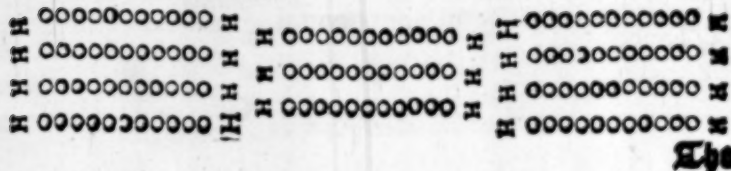
And

## The ordering of Souldiers

And these thre partes when it is needfull to bring them into a fowresquare battaile, muste be ordered as aboue is rehearsed, or elles causing the first parte in the fowrwarde to staye, and to make the second part to procede onwarde untill the heade or fronte of the seconde parte come to be even with the heade of the first, and so the saide seconde part standing still, to cause also the third parte to procede fowrwarde after the same maner, the which thing being done, such a battaile shalbe broughte into fashion fowresquare, with their Parkabutters or Bowemen before & behind: as appeareth by this figure,



But when in deviding the sayde roote there shall happen to remaine, 2. ouerplus, as should be when there were .121. the roote whereof is, 11. whiche. 11. perting into .3. comes to .3. times .3. and two remayning ouerplus (as I haue sayde) in this case and in other like, I woulde make 8. 11. ranckes to marche (that is, as many as the roote containes). 4. menne in a rancke, and an other .11. ranckes. 3. menne together in a rancke, and the other .11. ranckes also. 4. menne to a rancke: As hereafter appeareth in figure, with their .22. Parkabutters, beside the saide .121. menne.



The whiche men alwayes, when they woulde be brought into a fowresquare battell, muste be ordered as before is declared.

And this rule may serue likewise in what littell or greate number so euer it be, as well quadzante as not quadzante. As for example onely in wordes: put the case that there be. 3969. whereof being minded to know how many me in a ranke shold be caused to marche together by the waye, so that commodiouslye they maye at a so- den, be brought into a fowresquare battell, then must be taken the quadzante roote of this number of menne (by the same waye that I haue taughte) whiche shall be founde to be. 63. so that on every side of the square battell shall be. 63. ranckes of menne, and for as muche as this roote (whiche is. 63.) maye be deuided into. 3. equall partes, the thirde parte thereof is to be taken (for a generall rule) that is. 21. and therefore. 21. menne in a ranke woulde be made to marche together by the waye. And alwaies there shall be as many ranckes in all after. 21. to a ranke, as are thre times so manye as the roote is of, whiche is, thre times. 63. whiche comes to 189 so that. 189. ranckes of men shall be the number thereof after. 21. to a ranke. And by the roote that is. 63. you may vnderstande that suche deuision is to be made betwene. 63. and. 63. so y the firste shall be as well. 63. part as also the seconde and the thirde. In whiche deuisions the two double ranckes of Markabutters are to be placed for the rebier knowledge to bying them into a square battell. But if in deuiding the roote into thre, there shoulde remayne .1. ouerplus, as shoulde happen if the presupposed men were. 5776. the roote whereof being 76. whiche roote deuided into. 3. shall come vnto. 25. and one to remayne ouerplus. Nowe I saye, that all the ranckes that riseth of these men, shall be notwithstanding thre times so manye as the roote, that is thre times. 76. which makes. 228. And for as muche as all

## *The ordering of souldiours*

these orders of ranckes, are deuided euermoze into .3. partes (as befoze hath bene declared). 76. ranckes to a parte (that is so many as the rote is of) therfore it is to be vnderstande, that the firste and the laste of these thre partes muste be made to marche. 25. men in a rancke, whiche is as muche as is the thirde parte of the rote, and so that there remaineth one ouerplus (as aboue appeareth) I saye that the same one muste be put alwaies in the seconde parte, whiche is in the middeste. I meane causing those of the saide seconde parte, to marche. 26. menne in a rancke, so that the firste and the last part of the greate rewe of ranckes, be. 25. men in a rancke, and the second parte to be. 26. men in a rancke, and the very same ought to be done of euery other rote that may be deuided into thre. where onely remaineth ouerplus one but when there remaineth the ouerplus .2. it followeth, cleane contrarie: For that the firste and the laste parte would be of one man moze, then the same that the thirde part of the rote is of. As for example if the saide men were 2809. the rote whereof is. 53. whiche deuided into thre, comes to. 71. and. 2. remayning ouerplus: therfore of so many menne, there shall be made. 159. ranckes (that is thre times. 53.) whiche. 159. ranckes deuiding them also into thre partes cometh vnto. 53. to a parte, that is the number of the rote. And the firste and thirde parte would be of one man moze then the thirde parte of the rote, that is, it would be of. 18. menne to a rancke, and the seconde parte, whiche is the parte in the middeste, would be the very thirde parte of the rote: that is, 17. menne to a rancke, so that of all the. 159. ranckes, as wel the first. 53. ranckes, as likewise the last. 53. ranckes ought to be of. 18. men to a rancke, and the. 53. ranckes in the middeste would be onely of. 17. men to a rancke. And, wherein parting the rote into .3. there remaineth the ouerplus onely one, it goeth cleane contrarie to this. For that the firste and the thirde parte of the saide



sayde great retw of ranckes, will alwaies be of as many men to a rancke as shalbe the whole thirde parte of the rote, and the middle parte, whiche is the second, will bee of one man moze then the thirde parte of the rote. And so; as muche, as there can neuer remayne ouerplus aboue one or two in deuiding the rote into thre, therfoze this foresayde rule shall serue in what number of men so euer it bee, as well Quadzante as not Quadzante, so; that like as besoze is sayde in numbers not Quadzante, alwayes there is taken the rote whiche goeth nereest to suche a number, and therewith to do accordingly, as aboue hath bene sayed. And as so; the residue of the men that cometh to be ouerplus of the Quadzante of such a rote, maye be placed some other where as shall be thoughte moste beste. For example if there were foure thousande men, which number is not Quadzante, yet notwithstanding of the same number there oughte to be taken oute the nereest rote therof, whiche is lxiii. so that there shall remayne ouerplus one and thirtie men, whome minding in a suddaine to bzing into a fouresquare battayle, there oughte to be putte in a rancke. lxiii. men, and suche a battayle shall come to be fouresquare, as in the beginning hath bene sayde; and where there remaynes ouerplus those. 31. men, the Sergiant may place the as he shal thinke good. Likewise minding to cause those 4000. men to march, there ought also to be taken the nereest rote therof, which as aforesayde, is. 63. which deuiding into thre, comes vnto thre times 11. & nothing remayning ouerplus. And therfoze the sayde men ought to be caused to marche. xxi. in a rancke, & the sayde rancke to be deuided into thre parts. lxiii. to a rancke according to the foresayde rule, in suche sorte that the last parte shalbe. 64. ranckes, and also. 10. men moze because of those. 31. men that were ouerplus in the beginning, the whiche as hath bene sayde remayned oute of the araye: And after the same maner,

## *The ordering of Souldiours*

it is to be done when the roote of such a number that is not quadzante, doth not agree with the perfecte deuision by thre, which is, if there be ouerplus one, to procede as aboue hath bene declared. I meane to put a man moze in a ranke to the middell parte, and to the other two partes, the first, and the third, to put onely so many men in a ranke, as the thirde parte of the roote shal conteine, and when there remaineth ouerplus two, to procede cleane contrary: that is, to put a man moze in a ranke to the firste, and to the thirde parte, and to the seconde, to put onely so many men in a ranke as the thirde parte of the roote shal bee of, and those men that are remaining ouerplus, in taking out the roote in the beginning, to place them as aboue I haue saide.

¶ Howe to ordayne a number of men or an armie into a battayle, like vnto a wedge, or three square, so that it maye be apte to marche with the poincte thereof towards the enemies. Cap. 3.

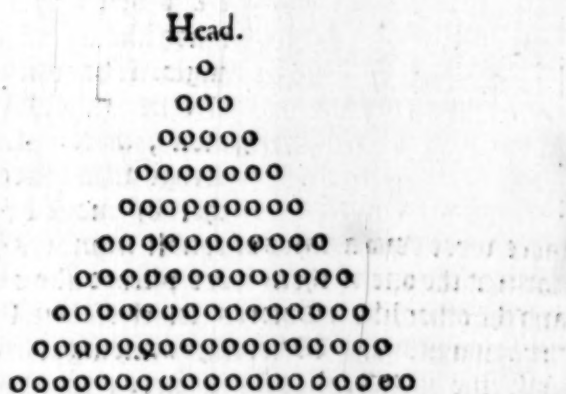


This fashion of battayle, is made after this maner, first placing one man, and after thre, and next fiue, and after seuen, and then .9. after a .11. & so to increase alwaies two men moze, till suche time as there be no moze men to place. Albeit there maye be such a number of men, that at the last they can not, or there shall not be sufficient to make vp the last ranke, which hapning, those men may be left out of the araye to serue wher their captain shal thinke most meete, for y the like hapneth often times, and in ouerpe maner of ordering men, that alwayes there resteth some man out of the array. And for the better vnderstanding hercof: admit for example that the men that is to be brought into a thre square

*in battelray.*

*Fol. 7.*

square battaile be a. 100. I saye that firſte one is to be placed, after. 3. after 5, after. 7. after. 9. after. 11. and ſo to procede: adding alwayes two men moze in a rancke, untill they be all placed, as here following appeareth in figure. Where the laſt rancke in this caſe, ſhall come to be 19. men, not remayning anye man ouerplus: and this is, for that the number of men, (whiche is. 100) is a Quadzante number: and likewise in every other number that is Quadzante, the ſayde Triangle battaile ſhal be made withoute any man remayning ouerplus.



But if the ſayde number of men be not a quadzante number alwayes there ſhall remayne ouerplus ſo manye men, as the ſayde number of men ſhall be moze then the great quadzant number contained of the ſame: as for example, if the preſuppoſed men to make the three ſquare battell were. 120. I ſaye that there ſhall remayne ouerplus. 20. men oute of the aray of the three ſquare, that is ſo manye as the. 120. exceadeth. 100. (being the greater Quadzante number containned in the ſame) whiche alſo ſhall be. 20. but if the ſayde men were. 123. there ſhoulde remayne ouerplus only two men, for as muche as the greateſt quadzant number

## *The ordering of Souldiours*

ber that can be taken of. 123. shall be. 121. and. 123. is more then the saide. 121. by the saide two, and the verge same is to be vnderstand in euery greate number.

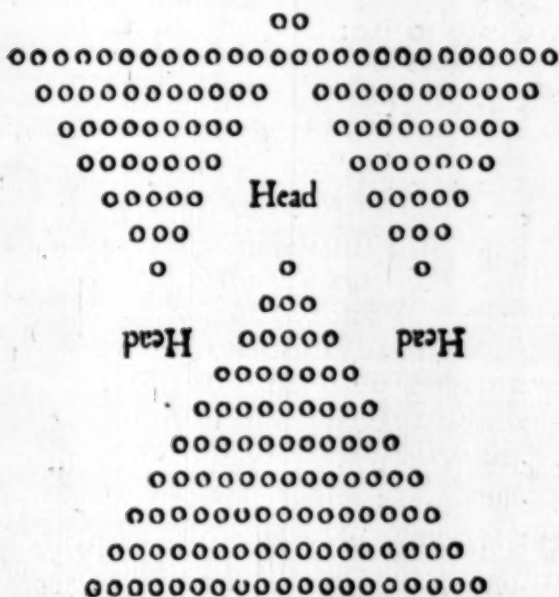
To make the battell called the sheeres, whiche in olde tyme they vsed to set against the Triangle.

Cap. 4.



He Sheeres are made with two Triangles ioygned together, for to receiue betwene them the saide battell, made like a wedge or Triangle. The example whereof I wil make also with. 100. men, as the Triangle or wedge was made, so that thereby maye be iudged if there were two armies of equall numbers of menne, and that the one of them were pitched like a Triangle, and the other like a Sheeres, which of them should haue the aduantage. Wherefore minding of. 100. men to make the battell called the Sheeres, they oughte to be deuided into two equall partes, and of euerye one of these partes being. 50. to make a Triangle according to the maner aboue declared, and to iohne them together, as here folowing appeareth in figure with their pointes towardes the enemies: I meane towardes the wedge, to receiue it betwene them: And it is to be noted how in making of these two Triangles, there shall remaine ouerplus one man of euery one of them out of the araye, for that the number of. 50. is no Quadzant number, and it is more then the Quadzant number contained of the same (whiche is. 46 by a man onely) so that betwene them bothe, there shall remaine ouerplus two men, as here appeareth in figure.





What auantage it is to order men in a Tri-  
angle battaile against the enemy that knoweth  
not how to make the battaile called the Shree-  
res to set against it, inesppecially where there is  
as many men of the one part as of the other.

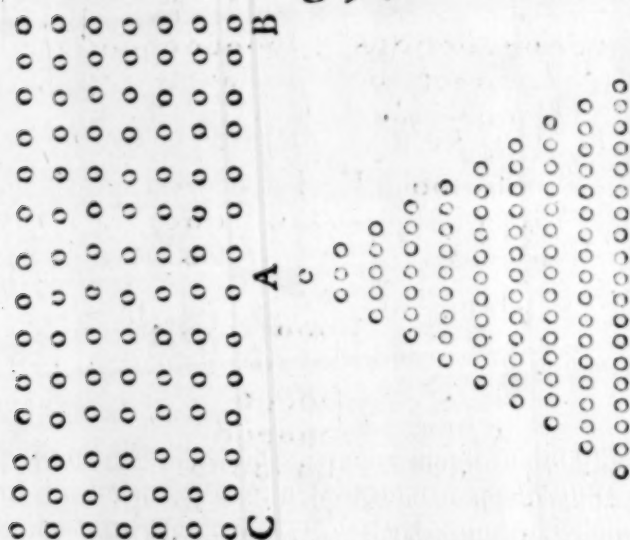
Cap.5.



When the contrarie parte woulde come a-  
gainst a threesquare battayle, with a bat-  
taye that were foursquare, as nowe a  
dayes is vsed, by all reason it shalbe bze-  
ken and ouertholue. As admit for ex-  
ample that there bee 100. in a threesquare battayle, & a  
hundred other men in a foursquare battaile, pitched a-  
gainst y<sup>e</sup> iii. square, as here folowling appeareth in figure.

And

## The ordering of souldiours



And so; that the order of the Triangle in fighting, is after suche sorte, that all those whiche shote with anye kinde of weapon. as peeces of Ordnance, Harkebuttes, Dartes, Bowes, or Crosbowes, oughte all to directe their shotte, and to strike only in the same place, where the pointe of the Triangle likes to enter, I meane in the pointe A. whereby the men that are in the same place, shall either be slayne, or else constrained to geue place to the pointe of the sayde Triangle throughe the great multitude of shotte striking in that place. So that the pointe of the sayde Triangle entering therein, maye continually penetrate al the sayde aray cleane throughe. For as much as all the Harkebutters, & Archers which remayne without, must not cease to shote in the verye same place., & no other where else: which thing doing it is impossible but that waye shall be given for the sayde Triangle to enter in, and once entred, suche an aray is ouerthrowen without anye remedye, For all the force and strength of suche a Triangle being made

made in that place onely, it is not possible that men in  
suche a place may be able to withstand, althoughe there  
were many moze in suche Quadzante aray, then those  
that be in the saide Triangle, because the place of. A  
cannot be succoured of any of those of the same battell,  
considering that if those which are placed towarde. B.  
or elles towarde. C. woulde come to succour the place  
where the violence and force is made, it must needes be,  
that they must disorder them selues: and being once dis-  
ordered, they runne into the very same mischicfe, after  
suche sorte, that they shall remaine altogether broken:  
and remaining in their places, their strength or power,  
relieth of none effecte: for as much as none of them can  
be able to do any thing, howe valiaunte soeuer he be.  
Whereby may be vnderstande of what importance this  
Triangle battell is againste the enemye, that knowethe  
not the medecin or remedy thereof.

To bring a number of men or an armie, into a batell,  
which in olde time was called a Sawe.

Cap.6.



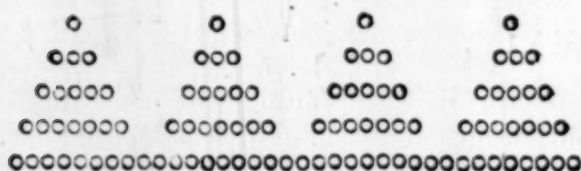
This fashio of Battell accordyng to the qua-  
littie of the name, oughte to be made  
as it were with teethe, like vnto a Sawe  
whiche they vse to Sawe timber with.  
all. And therefore minding to bying a  
number of men, or an armie into suche a fashio, there  
muste be considered two thinges, the one, howe ma-  
ny teethe, this Sawe is to be made of, and whether be-  
sides those teethe, there woulde be anye other raies to  
sustaine suche teethe or no. As for example, admit that  
the men of whome muste be made those onely teethe of  
this forcefayde Sawe, be. 100. nowe these. 100. menne  
oughte to be deuided into the number of the teethe that  
this Saw shall haue, and of euery of one those parts,

C.

to

## *The ordering of Souldiers*

to fashion a Triangle, by the Rule declared in the thirde Chapter: and those Triangles to ioyne close together, according as was done of those two that made the Sheres: As put case that of the sayde hundred men there woulde be made foure tenth of a Sawe, then the sayde, 100. men muste bee deuided in to foure partes, in whiche deuisions it will come to 25. for a parte. Nowe of euery one of these partes, there ought to be fashioned a Triangle, according to the order geuen in the foresaide thirde Chapter. And these foure Triangles to ioyne them straight together, as here following appeareth in figure: and this is in as much as in making the tenth onely: but if peraduenture there woulde be put an other order behinde the sayde foure tenth, it is needefull firste to determine of how many men such a rape is to be made, and those to take oute by them selues, and of the rest to



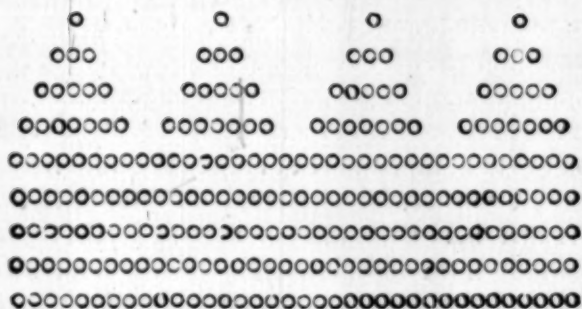
make the tenth, and behinde the sayde tenth to place those number of men whiche first were taken oute, and to ordayne them so many men in a ranke, as shall bee founde directlye in length in all the hinder partes of the tenth that are made, as for example, admitte there bee two hundred & xliii. men, and that with a hundred men therof, there must be made foure tenth of a Sawe, & the other 144. to be made certayne ranckes to sustayne the sayde foure tenth: Wherefoze the hundred men being brought into foure tenth, as aboue is declared, consequently behinde those; there oughte to bee placed those C. & xliii. men. xxxvi. mē to a ranke: for as much as in all the foure lower partes of the sayde foure tenth there



*in battelray. Fol. 10*

there be 36. men as in the figure nexte following appeareth. And after this maner and order, if there were a hundred thousande men, they mighte be set in a raye, placing them, as aboue is done with that litle number.

Front.



To fashion a battayle of a number of men or an armie like vnto twoo Triangles ioyned together, so that they may bee apte to marche with a corner therof towards the enemies. Cap. 7.

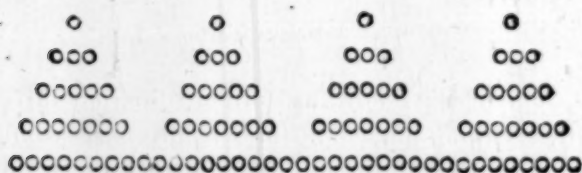


With the rule whereby the single Triangle is made, with the verie same almost this fashion battayle is also made: for as muche as deviding all those men, or that Armie wherewith this fashion battayle is made into two equall partes, and of the one halfe thereof to make a Triangle, and that done, vpon the very last side of the same, there ought to be placed the other halfe number of men in ranckes, which continually go decreasing by two me lesse, I meane cleane contrary to what was done at the beginning with one, where beginning to make the pointe of the Triangle, the ranckes were continually increased with two men more. But it is to be vnderstande, that if in making the first Triangle, there happen

to

## *The ordering of Souldiers*

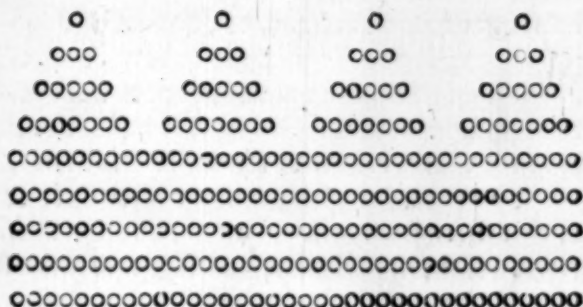
to fashion a Triangle, by the Rule declared in the thirde Chapter: and those Triangles to ioyne close together, according as was done of those two that made the Spheres: As put case that of the sayde hundred men there would be made foure teeth of a Salwe, then the sayde 100. men must be deuided in to foure partes, in whiche deuisions it will come to 25. for a parte. Nowe of euery one of these partes, there ought to be fashioned a Triangle, according to the order geuen in the forsaide thirde Chapter. And these foure Triangles to ioyne them straight together, as here following appeareth in figure: and this is in as much as in making the teeth onely: but if peradventure there would be put an other order behinde the sayde foure teeth, it is needefull firste to determine of how many men such a raze is to be made, and those to take oute by them selues, and of the rest to



make the teeth, and behinde the sayde teeth to place those number of men whiche first were taken oute, and to ordayne them so manye men in a rancke, as shall be founde directlye in length in all the hinder partes of the teeth that are made, as for example, admitte there be two hundred & xliiij. men, and that with a hundred men therof, there must be made foure teeth of a Salwe, & the other 144. to be made certayne ranckes to sustayne the sayde foure teeth: Wherefoze the hundred men being brought into foure teeth, as aboute is declared, consequently behinde those, there oughte to be placed those C. & xliiij. men. xxxvi. me to a ranke: for as much as in all the foure lower partes of the sayde foure teethe there

there be 36. men as in the figure nexte following appeareth. And after this maner and order, if there were a hundred thousande men, they mighte be set in a raye, placing them, as aboue is done with that litle number.

Front.



To fashion a battayle of a number of men or an armie like vnto twoo Triangles ioyned together, so that they may bee apte to marche with a corner therof towards the enemies. Cap. 7.



With the rule whereby the single Triangle is made, with the verie same almost this fashion battayle is also made: for as muche as deviding all those men, or that Armye wherewith this fashion battayle is made into two equall partes, and of the one halfe thereof to make a Triangle, and that done, vpon the very last side of the same, there ought to be placed the other halfe number of men in rankes, which continually go decreasing by two men lesse, I meane cleane contrary to y<sup>e</sup> was done at y<sup>e</sup> beginning with one, where beginning to make the pointe of the Triangle, the rankes were continually increased with two men more. But it is to be understande, that if in making the first Triangle, there happen

Cy. to

## *The ordering of Souldiers*

to remaine ouerplus any men, that are not sufficient to make vp an other rancke, yet the very same rancke oughte to be finished vp with some of the other halfe number of men, for that one of these two Triangles ioyned together, commeth to be of one rancke more then the other. As for example, admit the men, wherewith this fashion battell is to be made, be .320. which muste be deuided into two equall partes, so that by suche deuision there wyll be .160. men for a parte, and of the one of these partes, there woulde be made a Triangle, according to the order declared in the thirde Chapter, whiche done, there shall be founde to remaine ouerplus .16. (by the reason aledged in the saide thirde Chapter) so that there shall lacke .9. men to finishe the saide laste rancke of the first Triangle: Therefore the saide rancke muste be made vp, with the men of the other halfe, as taking those .19. men whiche lackes, so that in the saide firste Triangle maye be .169. men, and in the other parte onelye .151. menne, wherewith the other Triangle ought to be made vpon the laste rancke of the firste, whiche laste rancke shall be of .25. men: wherefore vpon the same, there muste be placed an other rancke of two men lesse, that is .23. and vpon the same saide .23. menne, to place an other of .21. menne. and vpon the .21. menne, to place an other of .19. menne, and vpon those .19. men, so place an other of .17. men, and so to procede alwayes with two men lesse, till suche time as it cometh to the rancke of one man onely, as here folowing appeareth in figure: And it is, that there shall be founde in the ende, to remaine ouerplus .7. men, the whiche the Sargiant maye place where he shall thinke good. And thus with this maner of order, there maye be brought in, to like araye, anie armie howe greate so euer it be, and they maye turne them selues, and in marching, make of the Rerewarde, the Forewarde, and likewise of what so euer side they like.

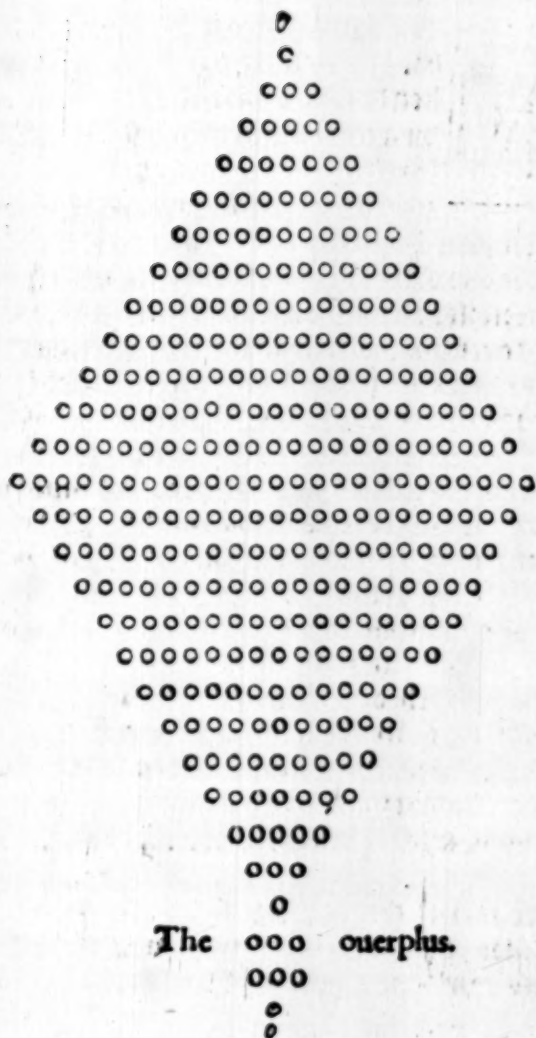
Front



*in battelray.*

*Fol.ii.*

Front.



The ouerplus.

C.iiij.

VWhat Y

## *The ordering of Souldiers*

**W**hat is best to be done where the ordinance of  
the enemies being shotte into the army hath  
slaine many men. Cap. 8.



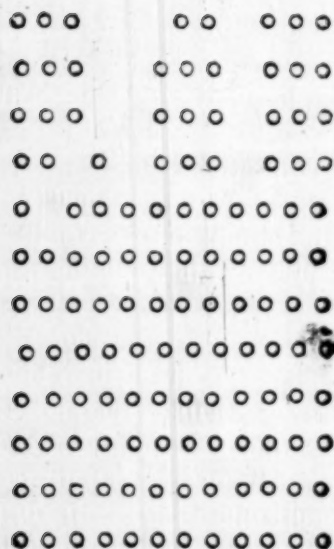
**A** Armye of menne that happeneth to  
haue certaine rancke s thereof to be stri-  
ken downe & kilde with the enemies or-  
dinaunce, and marching after such sozte,  
leauing boide the places of those menne  
whiche are slaine with the Artillerie, or  
els drauing the selues close altogether, to fill such empty  
place s, the one of these waies is very euill, and the other  
much worse: for as muche as leauing those places after  
such sozt open, inespially in the sozteward, there is ge-  
uen thereby greate faciletie vnto the enemies to enter  
into the saide raies, and to ouerthrowe them. And like-  
wise causing after such misfortune & saide raies to draw  
together, to fill the saide places, those raies must nedes  
altogether be disordered, and shall bee broughte almoste  
into confusion: for & it is to be thoughte that the saide ar-  
tillery, dothe not destroye any rancke of menne wholpe  
from one ende to an other in lengthe, but onclpe a  
parte of some, and a parte of other, and some to  
remaine vntouched, or vnhurte. In whiche case be-  
ing minded to cause them to drawe together, to fill vp  
the sayde boide places, it muste nedes followe that the  
whole rancke doo disorder in lengthing those that lacke,  
so that some of the ranckes shall remaine withe a grea-  
ter number of ranckes of menne (in length) in the Re-  
reward, then in the sozteward, whereby if such a bat-  
tell woulde marche of necessitye it will immediatlye  
run into confusion, because of those ranckes that are  
vnprefect in lengthe, Wherefoze that Capitaine, is to  
bee praised, whiche instructeth his menne that in like  
chaunces, they neuer remaine withoute a compaigni-  
on befoze them, excepte it be in the fronte, as to ad-  
uertise

uertise euerye one of them , that if fortune to happen  
anye of them to lacke the same man , whiche was  
wonte to marche befoze them , oꝛ elles mo , that then  
incontinent , and with seleretrie they do marche foꝛ  
warde , vntill they finde an other companion in the  
accustomed distaunce befoze them , and where it fortu-  
nethe no man to be founde , to aduertise them , howe  
they shoulde then procede till they come to the head oꝛ  
fronte, and in such place to stand still, oꝛ elles to march  
accoꝛding as the other ranckes in the headde oꝛ in the  
fronte shall do. And this being a generall rule  
that euerye man muste take the measure of his mar-  
chyng softely oꝛ faste of his compaignions that goeth  
befoze him, and not of anye that be of theyꝛ sides. All  
those menne therfore that shall be founde in the berye  
same rancke behinde suche a man that doeth lacke his  
compaignion oꝛ compaignions befoze him , shall be  
constrained to runne , oꝛ go a pace accoꝛding as that  
man shall marche, whiche shall be nexte befoze him:  
whiche thing being obserued of euerye man in the bat-  
tell , alwayes the foꝛwarde oꝛ fronte thereof, shall  
come thereby to be whole and sounde , and those emp-  
tie places of the deade to be transefoꝛmed into the Rere-  
warde, in whiche places there shall not almoste be any  
perrill. As foꝛ example, admitte, that in a battell of  
144. menne in fashion fowze square, the enemies hath  
slaine 12. menne, as by the voide places in the figure  
folowing appeareth , I saye that hauing aduertised  
euerye man to do as muche as befoze I haue declared,  
whiche is, that euerye time that he lacketh his fellowe  
(oꝛ menne) that marched befoze him, he do straighte  
waye make haste , and withe all spede possible not to  
seace going foꝛwarde , till he finde an other compaigni-  
on

# *The ordering of Souldiers*

nion in the accustomed distaunce that goeth befoze him.

Front.



And if it fortune in suche a rancke that in the ende hee  
finde no man, yet he ought to pzoceade so muche till hee  
come to the last rancke in the ffront, and there to stande  
still, or els to marche accoꝝding to the oꝝder of the  
saide rancke. And likewise euery man ought to take  
heede that in his marching faste or softelye, hee do  
rule him selfe by his compaignion that goeth befoze  
him, and not of any of those that be on his sides: which  
thing

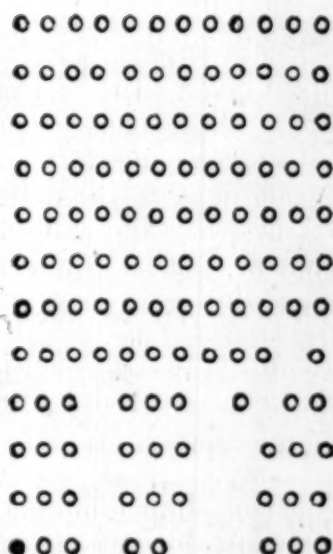


*in battelray.*

*Fol. 13*

thing being obserued , as in the figured rayes aboue

Front.



written, they same battales, shal be transfo:med in this  
other maner, like vnto the last figure , that is, those 12.  
voide places shalbe translated into the rethward, as plain-  
lye maye be seene.

¶ How to chaunge with speede an Armie, that is, in bat-  
telray fouresquare, into a triangell fashiō, without dis-  
ordering the first ranckes, and without perill of  
confusion. Cap. xix.

D

Like

## The ordering of Souldiours



Like as the Capitaine with sounde of the Trompette, or with voyce shall cause the Souldiours to be aduertised and taughte to knowe howe to turne that waye, which is betwene the fronte and the righte side. or the lefte, and likewise that waye that is betwene the righte, or lefte side, and the backe, and after that they shall bee well informed therein, euen so I would also haue the to be well aduertised of the same, that was declared in the laste chapter, whiche is to shewe and teache every man, that alwayes when he shall be caused to turne towardes anye of the foresaide sides, and shall not finde to haue his fellowe in the accustomed distance befoze him, that then the same man with all speede doo procede, or march so farre righte forth, till he finde a companion befoze him in the accustomed distaunce: Of whiche thing every souldiour being well informed and instructed, with the twinkling of an eye, an Armye that is in fashion. iij. square, may be transformed into a triangle. As for example, minding to make the right corner & point of the sayd triangle, with sounde of Trompette, or with voyce, causing euery man in the armie to turne them selues with theyr faces that waie, which is betwene the front and the righte flank, and incontinente, so sone as they are turned, every man observing the foresayd order, that is, that all those, whiche shall perceyue not to haue his fellowe befoze him in the accustomed distance, doo procede straight forth vntill he haue one, whiche done, the saide square fashion, shall be founde to be chaunged into a triangle fashion, and the point of the same triangle figure, shall come to bee the righte corner of the fronte of the firste figure. Whiche thing, is as easie to be done as is possible: for the triall whereof, let there be for example, 25. men standing in fashion square, as hereafter appeareth in figure, and to cause

cause it to be better vnderstande, I haue thought good to make this figure with the 25. letters of the a b c. Now minding to chaunge this soure square figure, into a triangell figure. it is needefull to cause the all to tourne

Front.

A	B	C	D	E
F	G	H	I	K
L	M	N	O	P
Q	R	S	T	V
X	Y	Z	&	'

With their faces that waye, whiche is betwene the head and the same side, where I haue thought good to make the point of the wedge or triangle: as for example purposing to make the corner. E. the pointe and head of the triangle, I shal cause that euery man do tourne with his face that waye, betwene the front & the righte flank, towarde the corner. E. whiche thing done, the fore sayde figure shall come to stande as here appeareth: in whiche figure maye be seene manye men, that hath no fellowe in the accustomed distance befoze him, although they haue a felow straight befoze him. much moze far

D. ij. ther

## The ordering of Soudiours



ther of them the ordinarie, whiche is double so muche as the ordinarie, as appeareth by .F. who hath righte before him .B. but the distaunce that is betwene the sayde .F. and the saide .B. is double so muche as the ordinarie distaunse, wherefoze if .F. shall obserue the preceptes aboue declared, immediately so sone as he shall haue turned his face that waye, he shoulde incontinent go, to come nearer to the saide .B. in the accustomed distaunce, whiche doing, he shall bring him selfe betwene .A. and .G. Albeit the saide .G. shall not remaine in his firste place, but shall goe nearer vnto .C. to the accustomed distaunce, and in the place where .G. was firste .L. muste come. So that .F. shall stande betwene .A. and .L. and likewise if all the other shall procede forward, according to the saide order, vntill euery man finde a fellowe in the accustomed distaunce before him .H. shall goe nearer vnto .D. and .M. shall followe the saide .H. and .Q. shall followe after the saide .M. euery one of them, vntill they come to theyr accustomed distaunce

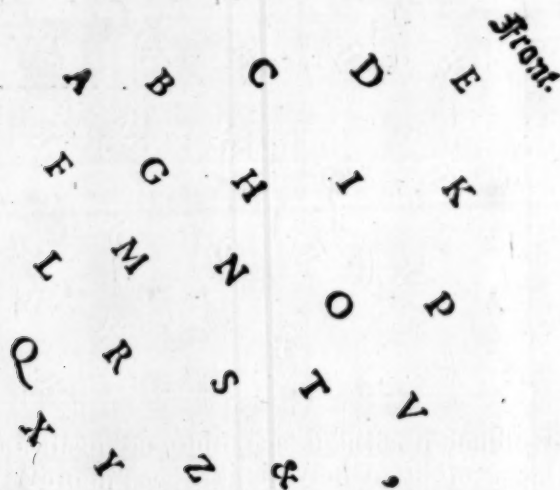


staunce. And in like maner. I. shall go nére unto. E. and N. shall followe. I. and. R. shall followe. N. and. X. shall followe the sayde. R. every one of them untill they come to their accustomed distaunce. Likewise. O. shall go nérer to. K. and. S. shall followe. O. and. Y. shall followe. S. also to the ordinary distaunce: and likewise. &. shall also go nérer to. V. to the accustomed distaunce, which thing being obserued, such a foure square battel shall be transformed into a triangle battell. as here following appeareth in figure, the point whereof shall come to be the corner. E. and with this order a Capitaine may change an armie, with turning of a hande, though it were of 100000. men from the fashion of a foure square to the fashion of thre square. So that the sayde men be aduer-



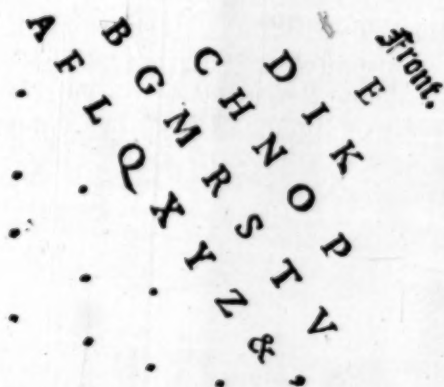
tised and taughte, as afore hath bene declared, both as well to knowe howe they oughte to tourne as to marche

## The ordering of Soudiours



ther of them the ordinarie, whiche is double so muche as the ordinarie, as appeareth by .F. who hath righte befoze him .B. but the distaunce that is betwene the sayde .F. and the saide .B. is double so muche as the ordinarie distaunse, wherefoze if .F. shall obserue the preceptes aboue declared, immediately so sone as he shall haue turned his face that waye, he shoulde incontinent go, to come nêrer to the saide .B. in the accustomed distaunce, whiche doing, he shall bying him selfe betwene .A. and .G. Albeit the saide .G. shall not remaine in his firste place, but shall go nêrer vnto .C. to the accustomed distaunce, and in the place where .G. was firste .L. muste come. So that .F. shall stande betwene .A. and .L. and likewise if all the other shall procede forwarde, according to the saide order, vntill euery man finde a fellowe in the accustomed distaunce befoze him .H. shall go nêrer vnto .D. and .M. shall followe the saide .H. and .Q. shall followe after the saide .M. euery one of them, vntill they come to theyr accustomed distaunce

stance. And in like maner. I. shall go nére vnto. E. and N. shall followe. I. and. R. shall followe. N. and. X. shall followe the sayde. R. euery one of them vntill they come to their accustomed distaunce. Like wise. O. shall go nérer to. K. and. S. shall followe. O. and. Y. shall followe. S. also to the ordinary distaunce: and like wise. &. shall also go nérer to. V. to the accustomed distaunce, which thing being obserued, such a foure square battel shall be transformed into a triangle battell, as here following appeareth in figure, the point whereof shall come to be the corner. E and with this order a Capitaine may chaunge an armie, with turning of a hande, though it were of 100000. men from the fashion of a foure square to the fashion of thre square. So that the sayde men be aduer-

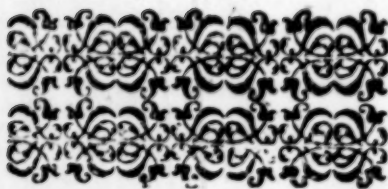


tised and taughte, as afore hath bene declared, both as well to knowe howe they oughte to tourne as to mar-

che

## *The ordering of souldiours.*

che. Whiche is of wonderfull impoꝛtaunce:foꝛ as much,  
as at a sudden to reduce an armye after this foꝛte into  
a triangel fashon,it is almoste impossible that the ene-  
mies shalbe able,oꝛ shall knowe how to make their ar-  
mie like the Spheres to set against it,wherby shal come  
great aduantage as by the 5.chapiter aboue is plaine-  
lye pꝛoued:foꝛ that it seemes vnto me that a triangle  
battayle,maye be alwaye sufficient able to bꝛeake all  
maner of fouresquare battayles as is vsed now a daies,  
although it had halfe so many moe men,so long as those  
of the triangel battel be well instructed of  
the maner of their fighting de-  
clared in the v.  
chapiter.





¶ Of the perfecte forme or fashion of  
strong places.



He forme which vnto the circular fashion doth moste resemble, of experte and skilfull souldiours, is aboute all other with most reason praised, so y<sup>e</sup> the Curtine or walles therof, be made straight, and of such length, that of the bulwarkes they may be flanked: whiche fashion being made with manye corners, is verie meete and necessarie if in a sufficient great place it bee erected: for where in small rowmes the iuste length of the courtin is shortened, it is conuenient to buylde them with fewe corners, because if otherwise they shoulde bee shortened with a number of corners, the shorter of necessity the spaces betwene those muste bee, so that besides that the one bulwarke maye hurte the other, they shalbe mozeouer to no purpose, but rather an occasion of infinite coste, their courtins needing as is requisit to be defended of platformes, and the corners therof shall come to bee lesse blunt, and muche sharper then they oughte to be, by reason of the litle distaunce betwene them and the platformes. Therfoze the moze that they be made distaunte from those bulwarkes (the one length of the curtin being kept) so much the blunter the corners will come to bee, which by them must be defended, and the moze of those corners that there are in the same fashion, so muche the blunter they shall also come to bee. So that where the fashion of the places that are builde bee sufficiente great to contayne all the foresayde particulars, whiche for a sure fortesse is requisite to bee made, all thing commodiously will come to passe: and the greater that they

## plattes

they shalbe, the more men they maye haue to defend them and more commodious space within, for to retire with greate and strong fortification, and the platfoymes maye be made muche further in, and haue the corners of theyr bulwarke blunt, and with a large backe, more for defence, and in an assaulte, muche surer then the sharpe, because the sharpe pointed bulwarke, being battered defendeth the enemye from the platfoymes, so that vnder the same, being couered, he maye almost oute of daunger, make an assaulte. Where against a Towne or Fortresse, that were builde after the fashion of these plattes folowing, in what so euer parte of such places, the enemy should approche marching towarde them to incampe, or in battell raie to assaulte them, or with Trenches, and artillery to batter them, either high or lowe or by the curtain within, or otherwise, he shall alwaies, from many of those flankers of the same place, be greatly hurte and repulced, and of the platfoymes in especially, more then from any other where, because they be mooste nere, and stande higher then all the other, and they shall also hurte him more, when he shall be somewhat farre of, then nere hande, as maye be sene by the plaine platte that hath the number .1. and in the same that is raised vp, that hath the number .2. The whiche with two other are also here after pictured, to the ende that thereby maye be considered of such as shall see them, the sundrye good and notable effectes that be in them, the whiche althoughe it be not possible so easelye with wyting to be expessed, yet by theyr helpe they maye be better vnderstande and comprehended, and moreover by them shalbe gotten this knowledge, whereby euery man commodiously maye vnderstande, where the enemye going aboute with his power, maye best deuise to assaile them, and howe they within maye prouide to defende and withstand the same with theyr men, taking them from those places wher

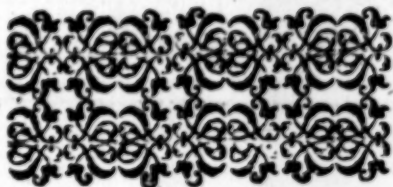
where they may best be spared, so y<sup>e</sup> building / be fashid  
of fortresses, in the saide maner, there shall in no place  
happen any such incommodities, as in other that are  
igno<sup>r</sup>antly made, after the ordinary fashion with lesse  
corners, as also by the se figures, here following is moze  
plainly declared.

There oughte also to be noted, that these and the o-  
ther plattes, in this treatise set fowth, being drawen  
in a litle space, coulde not bee fashioned with their due  
proportion: albeit to the ende that same which is reason-  
ed about them, might partly bee vnderstande, they are  
not left out or omitted: for without their help it shoulde  
hane bene impossible for any man, to haue comprehē-  
ded that, which I seeke to declare, concerning fortifica-  
tion, although they were expert souldiours: as by the  
foresayde plattes of the nombre of 1. and 2. maye mani-  
festly bee seene, howe well the courtesynes of suche a  
towne, is by the bulwarkes therof defended, and howe  
the ditches of the platfowmes, and of both of them are  
flanked and shewed, besides other thinges, whiche by  
the lines that are drawen be declared, where o-  
therwise it coulde not bee shewed after such  
sorte, as it might bee vnderstande, and  
the like happeneth in the other.

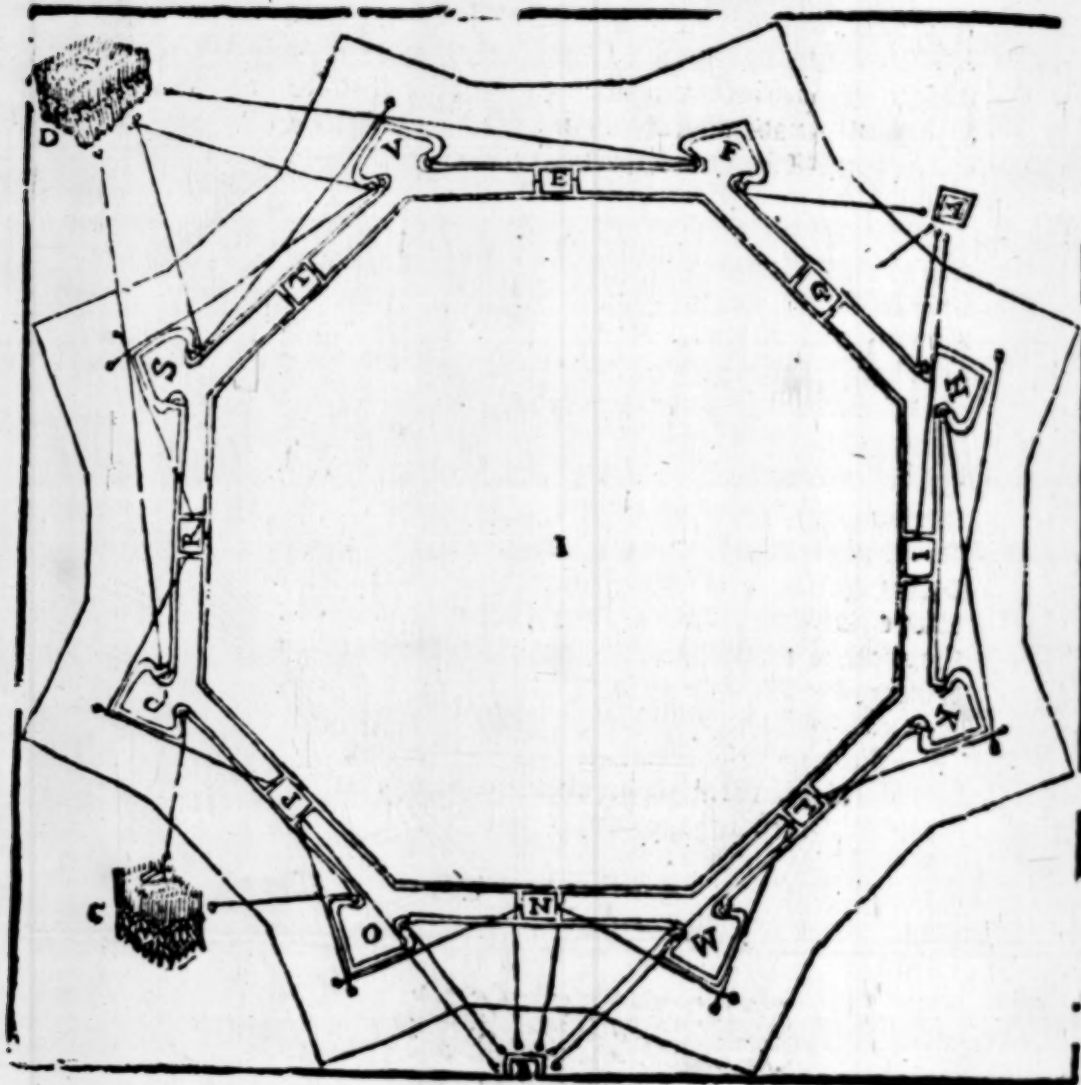


e.i.

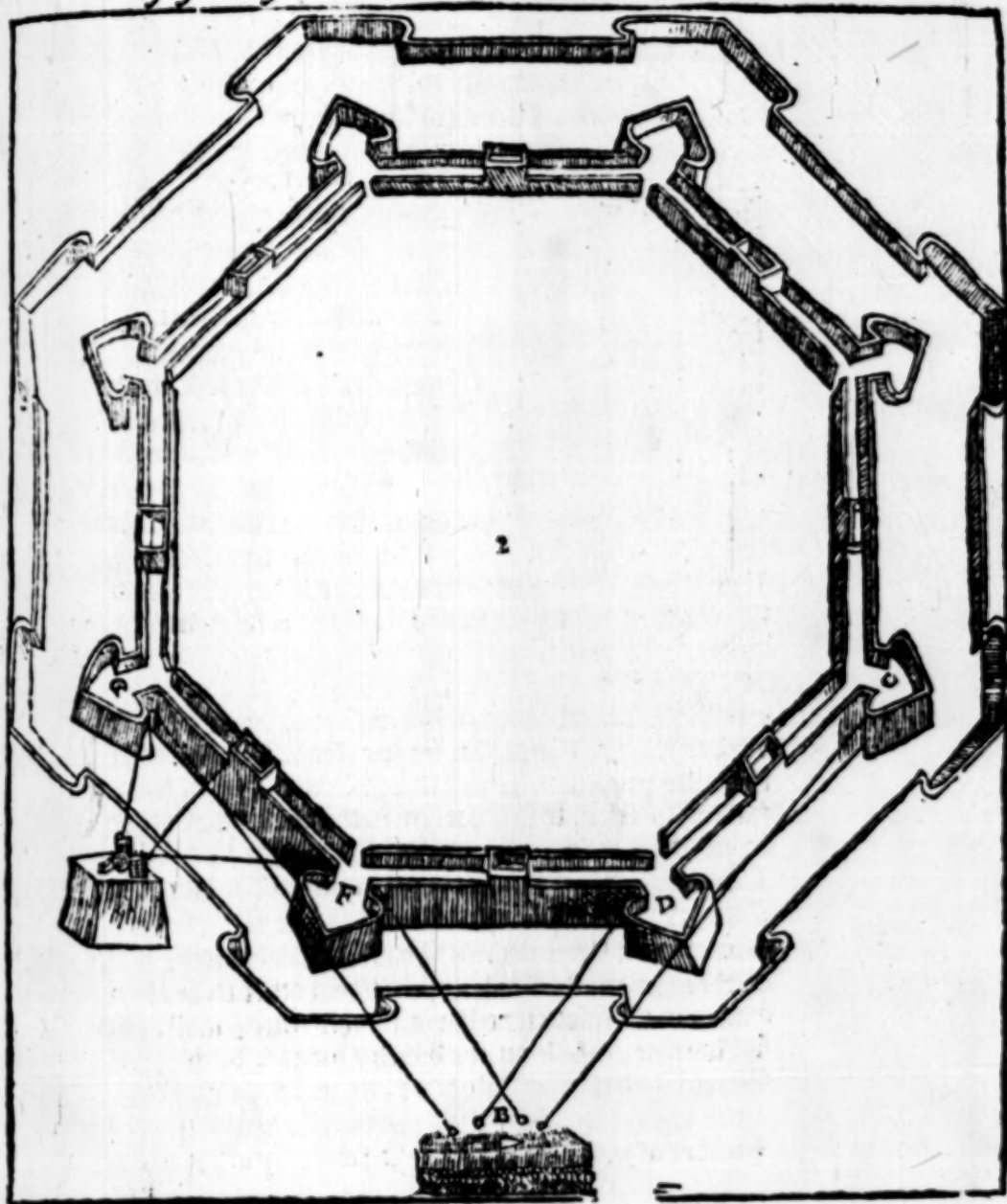
The



# Plattes







## Plattes

¶ The strongest and perfectest fashion of all other  
for the building of the cortin or vvall  
of a Towne or fortresse,



Efore being shewed concern-  
ing the perfection that for  
the fashion of Fortresses  
is requisite, howe thy oughte  
to be buylded with a nombze  
of corners ppozitioned ne-  
uerthelesse, with a iust lēgth  
of the cortin, and a sufficient  
distauce betwēne euerye  
bulwarke, so that the moze

that with like conditions to the circular fashion it re-  
sembleth, so much the moze it becommeth perfect.

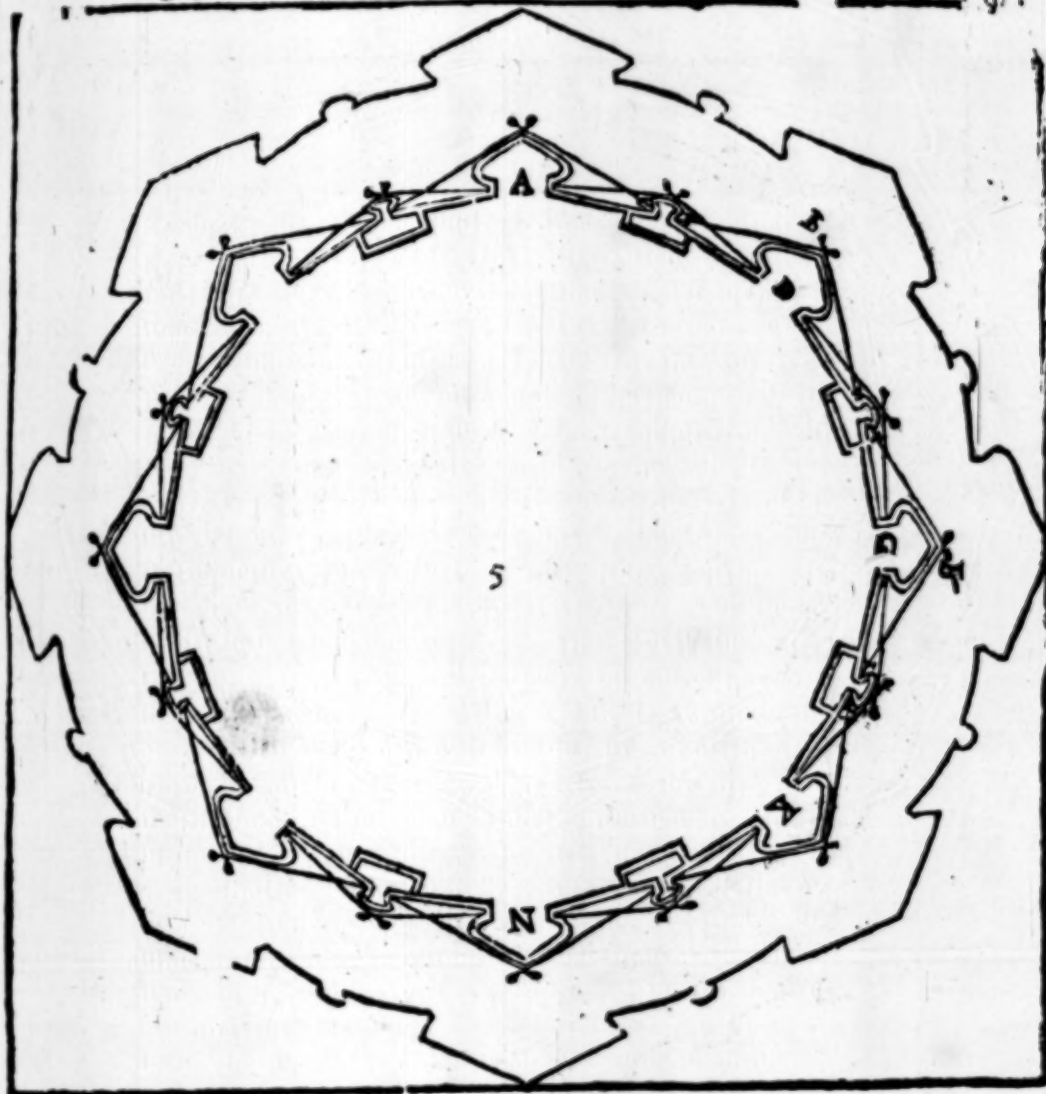
There now remained to be cōsidered, what fashiō is to  
be iudged of moste perfection, either the same whiche  
without any edification placed in the middelt of the cor-  
tin therof, shalbe builded, or that which shal haue either  
caualiers, or platfomes, or what so euer other maner  
of edification or figure, that for to defende the cortins of  
the bulwarkes may be placed: or whether it be of those  
fashiōs, which vnto this present hath bene vsed of other  
in buylding, or some new maner that might be deuised  
Therefoze in this part leauing to reason of those, that  
shall haue caualiers or platfomes as also of those bul-  
warkes that the cortins shall haue, which from the one  
to the other moste straightlye without other edification  
placed in the middelt do shote, for this time I shall only  
shewe a newe fashion, the which I iudge to be the most  
perfectest, that is possible to be imagined, as maye bee  
sene by the lines y are drawen from the plaine plat of  
the nūber of 3.4 by the plat that is raised vp of the nom-  
ber

ber of .4. here vnder figured, which resembling so nere the circular figure, as the due length of the curtin will suffer, they shal haue this difference frō the other which directly are distended, that the cortin being made backe a conueniente distaunce, that spase maye be leste mēte to make from the one and the other pointe of the same retire, a flanker, as two like flankers maye be sene, in the plaine platte of the number of. 3. by the letters .E. and .F. and in the platte that is rayed vp of the number of. 4. by the letters. A. and. C. they shal haue commoditie to directe their ordinaunce to flanke, as well highe as lowe, like vnto those that are commonly builde nowe a dayes: whereby, not onely the same spase of the curtin, that is betwene the one and the other of them shalbe perfectlye defended, as maye be perceyued by the platte of the number of. 3. by the line drawen from the letter .E. to the letter. F. but also that whiche lieth betwē them and the bullwarkes, as in the saide platte, by the lines that describeth the manner of the shotte the one from the letter. E. to the letter. S. the other from the letter. F. to the letter. R. maye be vnderstand, and likewise the curtines of those bulwarkes, as also in the verge same, by the line that is drawne from the letter. F. to the letter. Q. is shewed, with a better maner than in other fashion of building that is vsed can be defended, so that all the partes of them shal not onely be made to be able to shote by flanke, but also thereby to shote by righe line, as in the platte of the number of. 4. by the line that passeth from the letter. C. to the letter. D. and from the letter A. to the letter. B. maye be perceiued. And whereas they maye be builded with lesse coste then otherwise, they haue also commoditie to make their gates equallye distante the one from the other, from the nexte bulwarkes: where they are placed moste safelie and commodiouslie with greate strengthe, and those gates be as

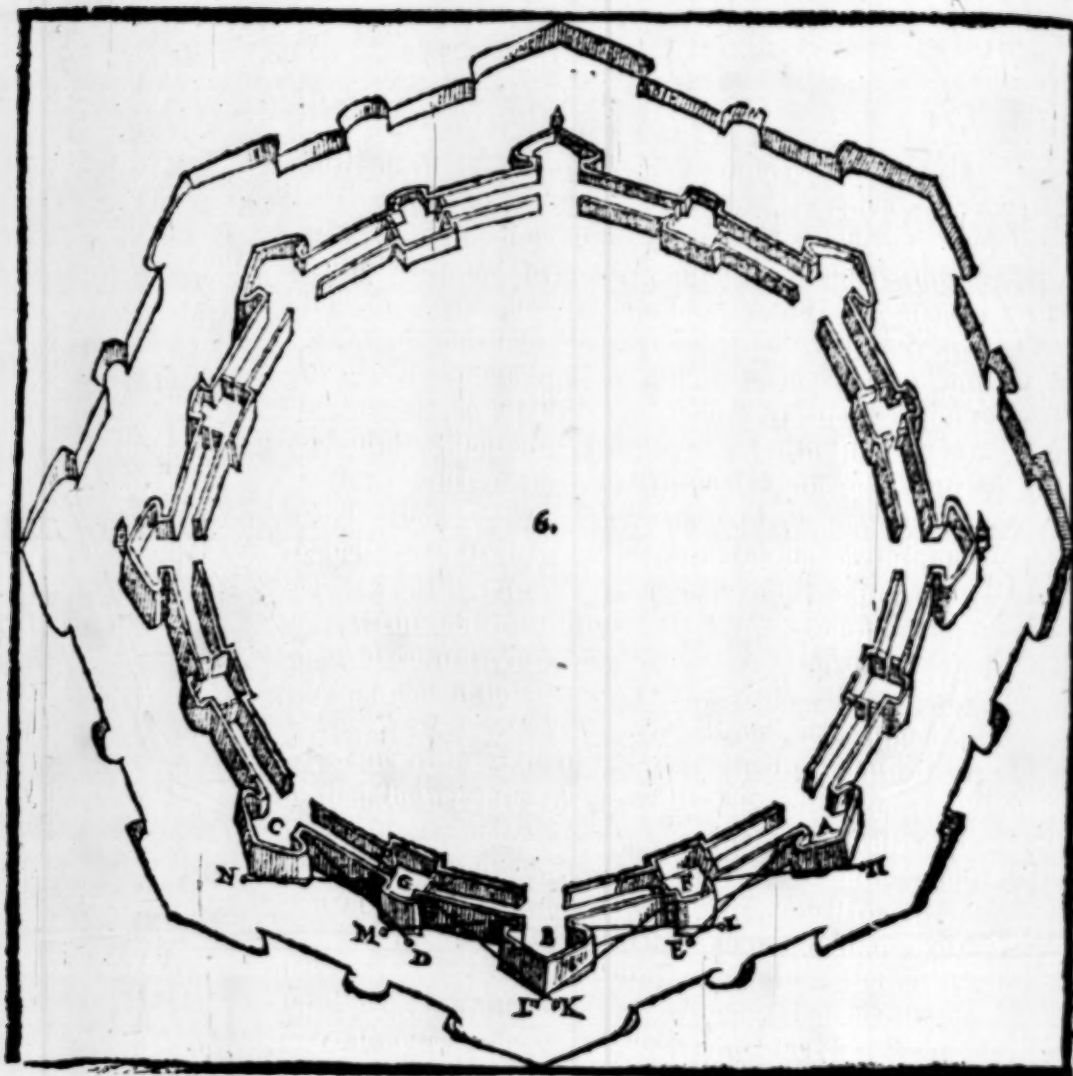
## Plattes

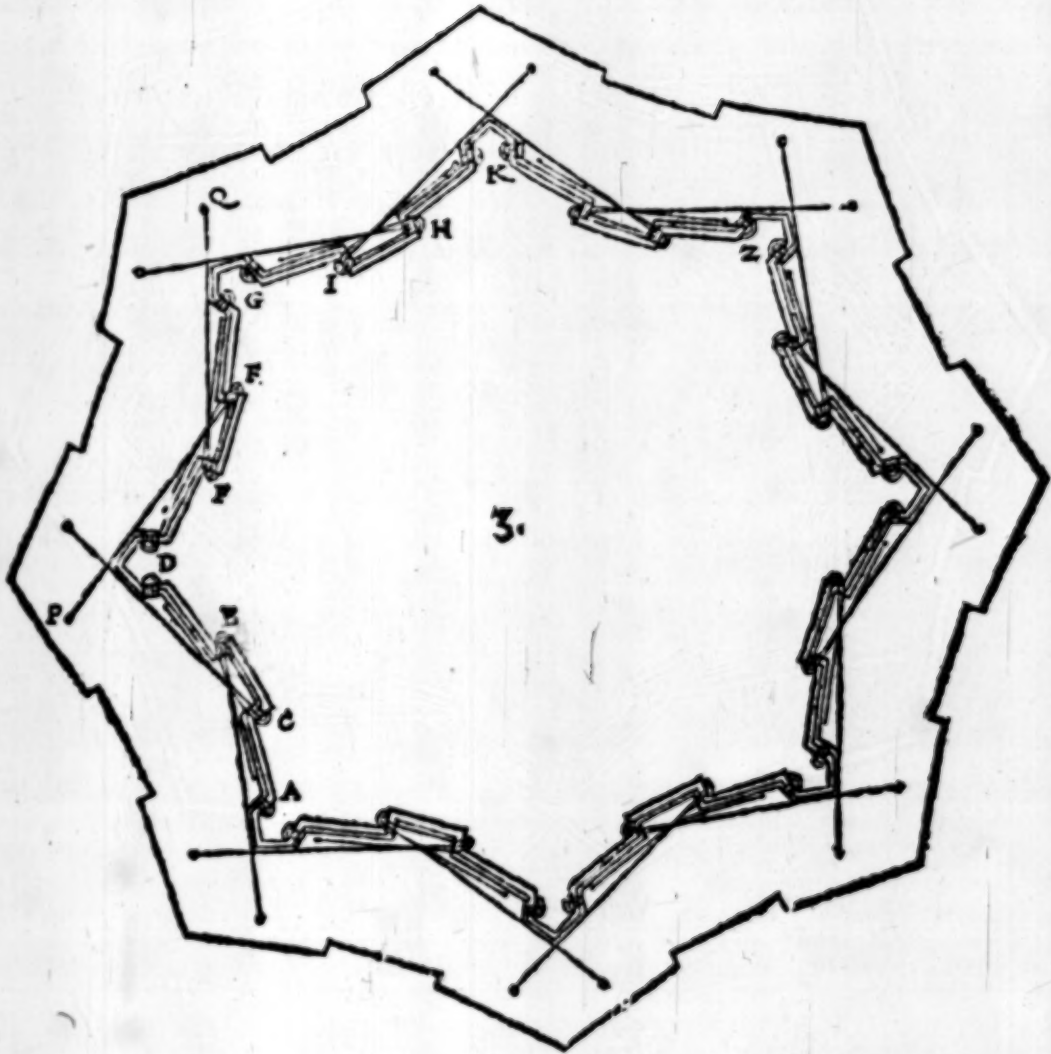
well, as all the rest of the wall. and greater in that parte, much surer from the assailing of the enemies, then in what so ever other manner of fashion might be devised: for as much as the platfozms. and cavaliers be nothing so strong, but more easie to be overtowen, in respect to this manner of building, which is moste sure from such daunger, and exceedingly well defended from the force of the enemy: to the which, the nerer that the enemy shall appoche, so much the more he shall of those within be hurt, contrary to that, which in the platfozms happeneth. Moreover there may be certayne slaughter houses builde in the ditch, as in the plat of the number of. 4. by the letters. F. H. is shewen, which the enemies with greate difficultie must firste seeke to winne, before they can come nere the walles. And those being wonne, shall be but small prejudice to the towne or fortreffe: wherefore without comparison, this fashion is greater to be praised, then the same with platfozms for that the nerer the Wall, the enemy shall come, so much more from the bulwarkes by flanke, and all most on the backe, and from other places, both by flanke, and by fronte in one instant, he shall be hurte and broken. Where also in such a kinde of fashion with many corners, the greatnes and roome of the towne within, is somewhat diminished, in respect to those that are made with platfozms. Therefore I conclude, for the considerations aforesaide, these to be the moste perfectest fashions that any strong fortreffe, is possible to be made.

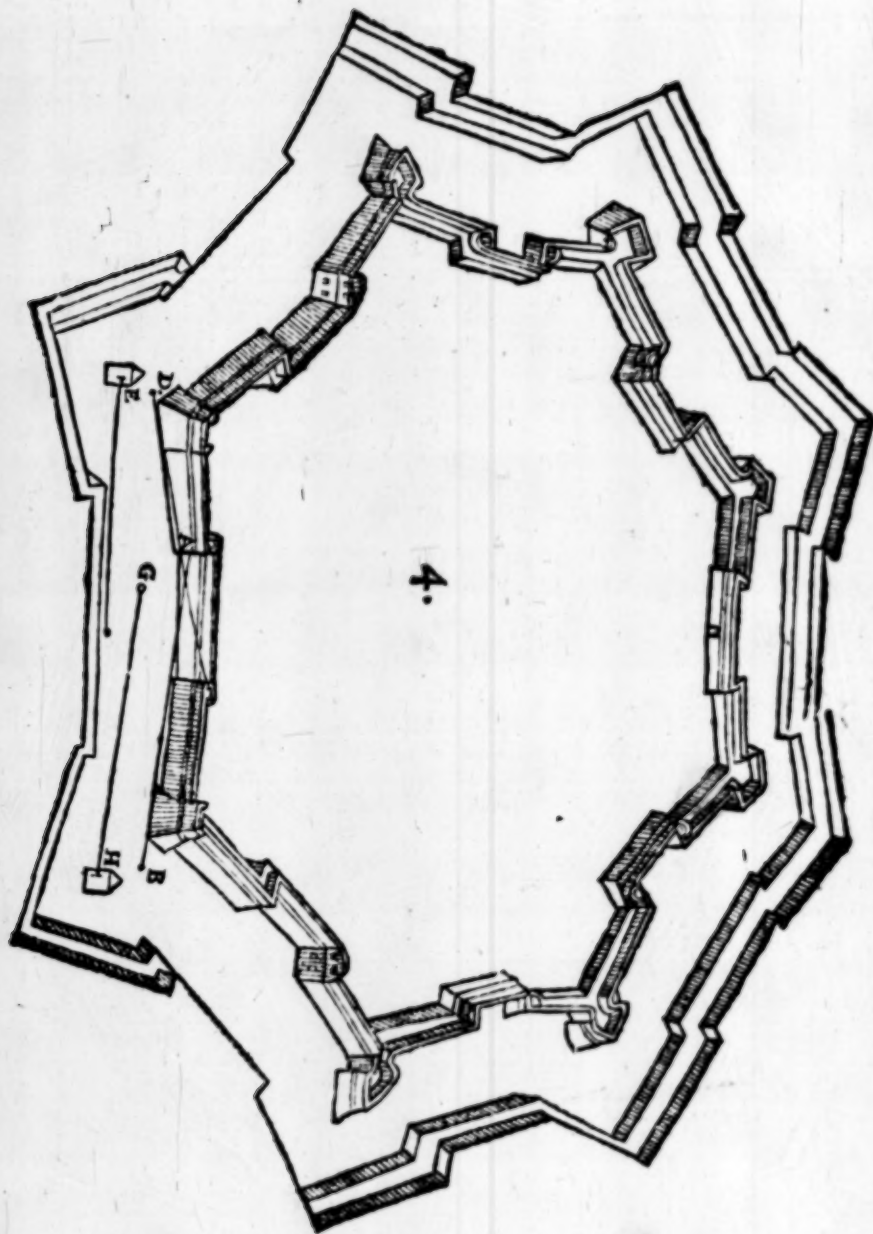




# Plattes









¶ An example of the quadrant forme to prooue that it causeth debilitie and vveakenesse.



HE tovnes & fortresses that are buylded after a foure cornered fashon, in what so euer maner they be made, are subiect to moste great inconveniencies: for that the sharpe corners of their bulwarkes whiche of necessitie the same fashon will cause them to have, may very easily be battered, and under the ruine thereof, the assaultes of the enemies defended, as in the platte following of the nombre of 7. by the bulwarke C. battered of the artillerie D. is sene. Whereby also maye be perceyved how the ordynance may be planted to make a breach, and to take awaye their flankers after such sort, that the enemies maye safelye appoche to anye place, either marching in battelray to incampe, or assaulte, or with pianers to worke, or for any other purpose, as by the foure flankers of the three bulwarke. L. E. C. may be vnderstande, the whiche of the artillerie. H. F. K. G. not onely are battered, but also two of them that haue the letters. L. C. as is sene, may of the artillerie. K. G. be beaten through their flankers, & the backe of the bulwarke. E. nearest to them, which is on both sides of the flankes battered, the which for baving in such place lesse thickenesse then anye where els, and great heigth, maye be the moze easilye ruinated. as is to be sene in the sayde bulwarke. E. battered with the artillerie F. and. H. and also by the breach of the batterye, whiche in the cortin is made of the ordynance B as is sene where the artillerie G. by the cortin doth beate through the same in the breach of the batterye A. as manifestly appeareth: and moze

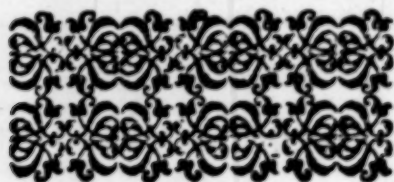
ff. ij.

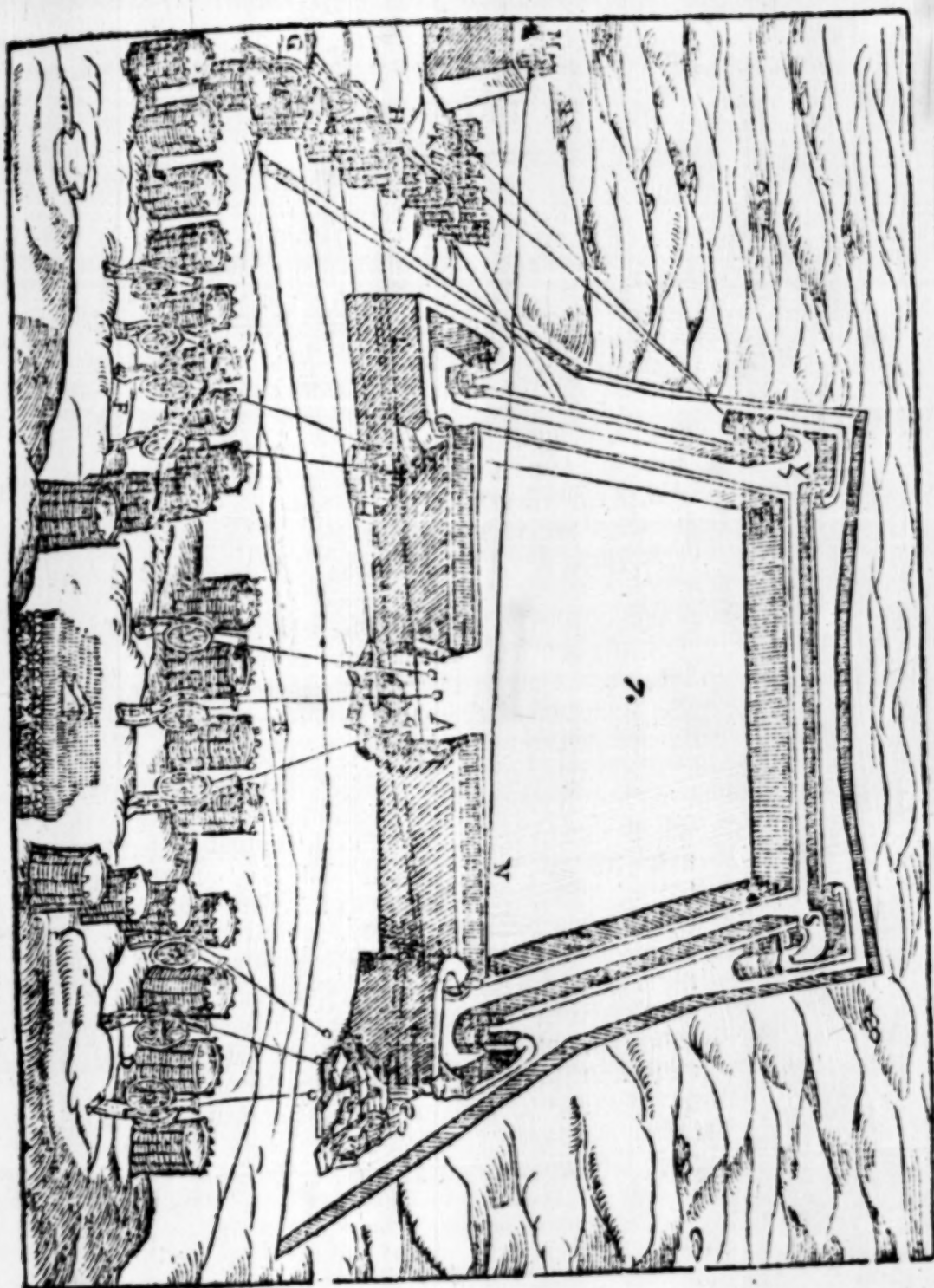
ouer

## *Plattes.*

ouer when they within woulde do any thing, they shall  
be beaten with the artillerie ouer the wall within the  
coztin N. frō the cavalier M. without, so that no man  
shalbe able to stande behinde the same to defende. And  
not onely in this sorte, but in sundrye wise, and in di-  
uerse maners, what soener towne or fortreffe is buil-  
ded after such fashon, maye easely be battered & some  
made sautable, whereby without further decla-  
ration it is playnly to be vnderstande,  
how much the foresaid plattes  
of the other fashon ex-  
cel this.

---





¶ *Of the nature of Saltpeter, and the  
maner howe to make and refine it.*



Altpeter is a mixture of manye substances, gotten out with fire and water of drie & durtic ground, or of y flower, that groweth oute of newe walles, in cellars, or of that ground which is found lose within tombes, or desolate canes, where raine can not come in: in the which ground (according to my iudgement) the same is ingendered of an ayrie moistenesse drinke by, and gotten of the yearthie dyines: whose nature (by the effect therof) considering, I cannot tell how to be resolved, to saye what thing properly it is. The well learned and most wise Philosophers (besides medicinall experience) by the taste (finding it salte, and with exceeding sottill sharpenesse, and considering the great byting therof) suppose verelye that it is of nature hotte and drie: on the other parte, seeing it to be a thing ingendered of ayre, and touched of fyre to fall in a flame, and vapoze, and rise with a terrible violence (as the same compounded, is seene by Conpoulder moste manifestly declared) seemeth to be of an ayrie nature, hot and moiste: and againe seeing it with shining and glittering whitnesse, as a thing to the nature of water conformable, it seemeth that it maye be sayde, that it is of a waterye nature, finding it heauye: to whiche maye be ioyned the experience of the taste, and of the exceeding coldenesse that in somer it causeth the water to be of, wherein it is put to keepe Wine colde, as they vse in Italye, and by the byttelnesse therof, it may be thoughte to be of the nature of earth: and so muche the more, where burning it with as muche brimstone, it will tourne into a harde white stone: so that to con-



conclude, it semeth that it hath the soueraintie & qualitie of euerie elemente. Nowe this of aunciente writers, was called nitro: and Plinie in his naturall historie in the. xxxj. booke sayeth, that it differeth not muche from salte: whose nature semes also that vnto Whisitions hath not bene hid: & it is found in manie places, but the best is founde Macedonia: Albeit the late writers, specially they of our partes, say that Plinie, and the other writers beleued that it was minerable: & peraduenture they are deceyued: so that there is of the artificiall: which hath the very same vertue, & as some thinke, moze strength of nature: & is founde so the very same medicinall effect, better then the naturall. Nowe this (as I haue sayde) is dyalwen so the from the sayde durtye yearthe, so that the yearthie dynes by raine hath not bene extinct: but the mooste excellenteste of all other, is made of the dunge of beastes, conuerted into yearth, in stabells or indungilles, of long time not vsed: and aboute all other, of the same that cometh of hogges, the mooste and best is gotten: what so euer dunge it be of, it is requisite the by continuance of time it be well resolued into yerth, and the humilitie therof dyed: yea and it is needefull the same yearthe be as it were dustie. No minde to haue a saye to knowe whether it be good, by the taste of the tong it maye be felte if it be byting, and howe muche: and finding it strong, so that you determine to worke of it (making a great quantitie) it is necessary to prouide manie Cauldrons, soynesses, barrills or tubbes: and likewise wood, white lime, and ashes of olde oke: but chieflie muste be prouided a great barne, or other walled house nere to the water (whereof it is needefull to haue inoughe, as also of yearthe, both commodious so the place, & likewise euery other thing.) But firste the soynesses muste be made so the cauldrons, and they muste be placed thereon, as those be that

## *The making and refining*

that the diers vse: then there must be prepared ioyntes as long as the house, and so by order, that commodities lie about grounds maie stande buttres with their heads knocked oute, square chests, barrells or tubbes to the number of. 50. or. 60. or. 100, (according to the rauldernes, and the capacetic of the place) and betwene euerie two of those vessels, there muste be set a halfe tubbe to receiue the water that shall run oute: or there woulde be placed a channell of wood that maye goe along vnder the holes of the vessels that are set about grounde, so that it maye conuey all the water that cometh from them, into a greate tubbe or two sufficient to hold all the water full of substance of Saltpeter: and the buttres that haue their headdes knocked oute, or barrells or tubbes, in the bottom of euerie of them there muste be made a hole on the one syde, with an Awgar, or els thre or fouer littell holes made with a good bigge perser: and vpon them muste be layde a littell thinne linnen clothe or els the ende of a byome, or some strawe, to the intente that it maie kepe the yearthe by and straine the water that shall be put amongeste the same yearthe which is to be wrought, when it is tasted with the mouth, so that it be certaine, that it containeth Saltpeter.

Then there muste be made thereof, in the middelt of the house where it is to be wrought, a greate hill, nexte vnto which muste be made an other halfe so bigge, which must be made with two pares of vnslaked lime, and thre of oke ashes, or other ashes, which in taske are verie strong and sharpe: and then the one hill muste be well mingled with the other, and with the same composition, the tubbes muste be filled that are set a losse vpon the ioyntes, within a span of the mowthe, or else (minding not to mingell with the yearthe the ashes & the lime together) you maie put firste a spanne thicke

nes of yearth in the bottome of the tubbe , and then  
thre fingers thiknes of the sozsayde lime and ashes:  
and vpon the same after , an other spanne thiknes of  
yearthe , and on that likewyse, an other thre or foure  
fingers thiknes of lime and ashes : and so putting  
one rewe of one thing , and an other of an other , you  
shall fill all the buttes and tubbes , or other vessells  
that you haue placed , euen as aboue I haue sayde,  
wythin a spanne of the mouthes of them, and the reste  
that is then emptie , which you leste , you muste fill  
with water : the which running throughe all the  
yearthe , by a littell and a littell , you muste let it  
droppe in the tubbes that stande vnder to receyue it,  
or in the gutter or channell, or where you like , so that  
it be conueyed into one or into sundrie tubbes, or where  
you thincke good : and so you muste see well that  
you gather all the water that you powred vpon the  
yearthe , after it is passed throughe the holes of the bot-  
tom of the tubbes, in suche wyse, that it bring with it  
all the substaunce and vertue of the Saltpeter that  
was in the sayde yearthe: whereof by putting some of it  
on your tongue, you maye taste: and finding it biting  
and very salte , it is a token that it is good and that  
you haue done well : if not, powre it agayne vpon the  
berye same yearthe, or vpon some other newe: but fin-  
ding the firste yearthe full of substaunce as muche as  
sufficeth, you maye agayne powre vpon it more water,  
to washe better the remnaunte of the yearthe: albeit  
this secunde water woulde be saued in an other vessell,  
and after this, the yearthe maye likewise be washed the  
thirde time, to thintente that all the substaunce there-  
of, maye perfectlie be gotten : but this secunde nor the  
thirde , ought not to be mingled with the firste , if it  
happen not to come of the verie same taste: the whiche  
I beleue that it will not : but it must be put by it selfe  
in other vessells , so that it is good to powre vpon the  
C. j.      change



## *The making and refining*

chaunge of the nexte yearth, and so you maye procede, gathering a good quantitie of suche water, taking heede neuerthelesse, that it be full of the substance of Saltepeter: the whiche if it seme vnto you, not of the same perfection, as you would haue it, you maye powze it againe vpon the verie same yearth, or vpon other new, till suche time as it satisfie you, and that you knowe, that it be full of the substance of Saltepeter. Besides this, there muste be made a furnes with one or .ij. cauldrons of brasse walled thereon, whiche muste be as greate as those that the Diers vse, and these cauldrons muste then be filled, with the foresaide Saltepeter water: the whiche (as alrebie I haue tolde) oughte to be as full of substance as maie be, so that it haue aboute the .ij. third partes, and make it faire and softlie to boile so much till it come to one thirde part, or there aboutes: and after take it of, and put it to settell in a greate vessel, couered, whiche muste be well bounde aboute, with ropes of yron, and sure and close in the ioyning thereof, to the intente it spill not: and thus when the same water is settled and well claresied, and from the yearthe and grosse matter, whiche in it remained, diligently purged, it muste be taken oute and boyled againe of newe in the same cauldron, or in some other: and soz as muche as euerye time that it boileth, if it be not taken heede of, it turneth into skum, and sometimes swelleth so muche, that often times running ouer it spilleth, and carrieth awaye therewith muche of the good: the whiche minding to remedie, you muste take thre partes of Ake ashes, and one of lime, and moze ouer, in euerye hundred the pounce waighte of water, there muste be dissolued fower pounce of roche Alum: and when the cauldron boileth, take of the sayde water with a pot, and powze into it ones or twise, and specially when you see the Saltepeter water rise in skum, whiche in a little while you shall see it alai, bothe clere  
and



and faire, and of an azur colour: and it muste be boyled so long, till all the thynne watrinesse be vapoized away and the substaunce of the Saltpeter thickened: so that it being taken out, and put in chestes or tubbes and cooled, maye congeale: the whiche is best done, when the water is brought to leaſt quantitie, taking it out and putting it into a lesse candzon, wherein it will ſoner congeale: the whiche water being taſted, and ſene to be brought to ſuche paſſe, ſo be reade to congeale, you maye take it out, and put it in veſſelles of wood, or of earth that are rough within, with certayne ſtickes of wood, ſo congeale, and ſo you ſhall let it cole, and reſt. ij. or iiij. daies, ſo as it maye drop, and be ſtrayned through ſome litle hole, in the bottom of the veſſell: and all the water that is not then congealed, you muſt take out and ſaue ſo to ſeeth againe: and the Saltpeter that is in anye quantitie congealed, you ſhall finde to be, according to the vertue that was in the water, or in the earth: but the clerenesse and fairneſſe thereof, will come of the maiſter vertue of the water, that is put into it in the boyling, which hath ſtrength to purge it, and make it come, as it were refined in the firſt ſeething: nowe this being taken from the ſides of the veſſell, where it congealed, and in the water therof waſhed, you muſt laye it upon a table to drie throughlye: and the ſame ſeeming unto you to haue neede, or neuertheleſſe minding to haue it aboute the common uſe, ſo ſome purpoſe, more purified, & without earthy groſneſſe, & altogether without fatneſſe and ſaltneſſe, whiche ſo to make exceeding fine ponder, or aqua fortis, is moſt requiſit ſo to be: to be ſhort, ſo what ſo euer cauſe it oughte to be refined, I counsell you, to do it after one of theſe ij. wayes, whiche here following, I ſhall teach you: The firſt, which I like beſt, is with water: and the ſeconde is with fire, with water it is refined in this maner, taking of the ſo: ſaid mixture made of lime, aſhes, and allome diſſolued: and

¶ ij.

then

## *The making and refining*

then for euery barrell of water that you haue put in the cauldron, for to disolue the Saltpeter, you muste put into it sixe pottfulls of the foresayd strong water: and in the same quantitie of water so prepared, put so muche Saltpeter as you thinke maye well be dissolved: and with boyling make it to resolue verie well, and seeing it in boyling to haue caste by scum, you shall then take it oute of the cauldron, and put it into a tubbe, in the bottome where of, you muste firste haue put sower fingers thiknes of fine sande cleane washed, and that muste be couered with a linnen clothe: and by a littell hole made in the bottome of the tubbe, you shall suffer it to droppe by littell and littell into some other vessell set vnder to receiue it: so this water thus strained, you must after put in the verie same or in an other cauldron to boile agayne, and to make the greater parte of the same water, that you put into it sethe alwaye: specially make it boile so muche, vntill you see it readye to thicken, powering nowe and than, in making it, a littell of the foresayde strong water, and speciallye when it swelleth and casteth by scum: and this thing (being so handled) you muste take it oute of the cauldron, and put it in chestes or other vessells of wood, to congeale: whiche, being a greate quantitie, in thre or sower dayes, you shall finde all that congealed, which will congeale: which, being taken oute, you muste order as you vsed afore the other: and the same water that is not congealed, muste be boyled agayne: and so you shall doe from time to time as it gathereth together and congealeth: and after this sorte you shall make the Saltpeter mosse white and faire, and much better then at the firste seething.

Also saltpeter is refined in an other manner, whiche is with fire. but in a littell quantitie mynding to doe it well: and although it be a readye waye, yet fewe vse it: albeit it serueth to get oute the fatnes of saltpeter,

ter, so that it sendeth into the bottome verie much  
 pearthyne, notwithstanding I like better the foresaide  
 waye in purging it with water, then this with fire:  
 But to do this, take a salet, or some other yron or  
 brasse vessell, and fill it with Saltpeter, and couer it  
 with a couer of yron, brasse or yearth, so that it be made  
 bigge inoughe, meete to be taken of and put on when  
 you liste, that the vessell maye be well couered: and  
 then it muste be set in the middest of a good fire of  
 coles, and so the Saltpeter will melte, whiche is sone  
 perceyued of the experte artificer: but when you thinke  
 that it is molte, looke vpon it: and if it be not well mol-  
 ten, couer it agayne and let it melte well: then it being  
 well molten, take brimstone molte finely beaten in  
 powder, and strawe some thereon: and if of it selfe it  
 take not fire, do you kindle it: and being kindled  
 let it burne till suche time as the brimstone be all con-  
 sumed, so that nothinge be burnt, but the vpper  
 parte, and certayne grosse vnctiousnes of the Saltepe-  
 ter, the whiche when it is burned, will leaue the reste  
 faire and cleare: and then it muste be taken from  
 the fire letting it cole, where in the vessell you shall  
 find it (when it shalbe coude) all in one pce white  
 like vnto a pce of marbell: and all the pearthyne  
 thereof remayning in the bottome: whiche shalbe good  
 saltpeter to make powder withall, but not verie com-  
 mendable to anie other vse: and aboute saltpeter the  
 witte of men haue so muche imagened, that meanes  
 are founde to cause it to growe in the grounde, and in  
 places: that neuer had anie before, by dissoluing Salte-  
 peter in water: so with the same water wetting the  
 grounde, and letting it stande so a certayne space of  
 time, saltpeter wil be ingendred, so that the same that  
 was put there, will multiplie wonderfully: and it is  
 a molte certayne thing, that in making Saltpeter,  
 the yearth that hath bene occupied, heaped vp in a



## The making

place that is covered, so that the rayne do not washe it, within the space of five or six yerres, maye agayne bee laboured, and Saltpeter shalbe founde to be ingendred, and yelde much moze, then it dyd the first time : & this that I have declared in this chapter, is as much as I can saye of Saltpeter.

¶ The maner howe to make all sortes of Gun-  
pouder. Chapter xxiiii.



Vn powder, is made of three  
simples onely: that is, saltpe-  
ter, Brimstone and Coales:  
and some proportioneth it  
after one fashion, and some  
after an other, and also accor-  
ding to the Gunnes, and pur-  
poses, wherewith they will  
occupie it. For that one sorte  
is occupied for great ordi-  
nance, and an other sorte for lesse peeces : and this is  
knowen to euery Bombardier: In Harkebuses, and  
hande gunnes, is not occupied common powder, but a-  
bout certayne fire woorkes : and therefore to euery  
of the sayde purposes, the pouders is proportioned ac-  
cordingly. For that if Serpentine powder, should be oc-  
cupied in hande gunnes, or Harkebuses, it woulde scāt  
be able to dyue their pelletes a quaites cast fro their  
mouthes : and if hande gunne powder shoulde bee v-  
sed in peeces of ordinaunce, without great discretion, it  
woulde quickly breake or marre them: and to minde  
to haue all sorte of pouders good, thre thinges is requisit  
to bee obserued, in making therof. The first is to see,  
that the substance, wherewith it is made, haue no  
earthie grossnesse. The seconde, that it be finely bea-  
ten: the thirde, that it bee very well dyed, from all  
humid



humilitie or moistenesse, and this done, you shall haue strong and excellent good powder. And it is to be vnderstanded, that the chiefe thing that is in powder, is Saltpeter: for that of it (by the same that is seene) dependeth all the force. And therefore prouision is to be made, to haue a good quantitie thereof, and that it be cleane and nete: the which by burning, maie well be knowen, for that in all sortes of powder, it is needefull, that the Saltpeter be good.

Now, for to make common powder, for greate peeces of artillerie there must be taken thre partes, of refined Saltpeter, two of Willowe coles, & one of Brimstone, and grinding every thing: all must be well mingled together, & all the moistnesse thereof dried vp, as I haue saide. To make powder for small peeces of artillerie, there must be taken fve partes, of refined Saltpeter, and one and a halfe of Coles, and one of Brimstone, & grinding it moste finelie, and mingling it well together, it must be coyned, and then dried. The maner of coining all sortes of powder, is with a Sæue made, with a thicke skinne of Parchemēt, full of little round holes, into the whiche Sæue the powder must be put, while it is dancke, and also a little bowle, that when you sifte, it maie roule vp and doune, vpon the clottes of powder, to breake them, that it maie coyne, and runne throughe the holes of the Sæue.

To make Harkebuse and hande Gunne powder, there must be taken tenn partes of refined saltpeter, and one of young basell cooles of a ycare olde made cleane, and one parte of Brimstone, and beating all in a moztar, or grinding it exceedingly well that it maye be mingled together and so fine as is possible, the it must be coyned and throughe dried. And note that if it be not marueylously well beaten, it wil neuer be good. But because making of powder, whiche are of thinges that will easylie kindell, cannot be withoute perill

## *The making*

perrill of him that maketh it, excepte it bee remedied with wetting: therefore it behoueth to take heed that it be not beaten drie, as well to auoyde suche perrill, as also so; that it will be beaten better: so; whiche causes it muste be wet with comun water to a certaine degree of moistenes, so that taken vp in ones hande it maye cling together.

Some moiste it with vinegar: and some, so; to make it moze stronger, with cap-hozed, aqua vita. When I haue caused gunpowder to be made, I haue vsed comun water, & therefore I am able to saye whiche of those thinges is beste: and to tell my opinion, I doubt whether vinegar or, aqua vita, causeth the gunpowder to be any better then the comun water: so; as much they vapozyng alwaye, as they doe, & as of necessitie they must, I beleue that littell of their substance remayneth.

There bee some whiche in making coale (besides willow) make the of hasell: & some of byne stikes: & some of baye stikes: some of reedes: some of kyses: & to bee shorte, all the coales that are made of softe wood, are of wood which haue much pith: but it is requisit that they be smalle, yong, and tender, and withoute hardenes of knottes: otherwyse they be not good.

Albeit they be made in diuers maners: but in making of any great quantitie of powder, the ordinarie coale is to be taken: and making a littell, they vse to take yong hasell of a yere olde, cut in shorte peeces, and they putting them into a greate pearthen pottle, or other vessell of yron, or brasse, they shutte it and couer it close, and lute it, or daube it very well aboute, so that it cannot bzeathe: and then they make fire rounde aboute it and vpon it, till suche time as it maye bee thoughte that the heate is well entred in throughe all, and that the wood that is within is very well fired: and without fire, bzandes, or flame, burned onely throughe suche heate: and then they take the fire from the pottle and let it coole,

Howe too  
make coale  
vvhether  
gunpowder  
is made.

cole, and so they finde the same wood become cole. I hapning once to haue néede of coles (to thintent to make some quicklie,) toke as manie drie hasel stiches that had their rindes scraped of, as I thought sufficiente to serue my purpose: and breaking them in peeces and laying them close together on a heape, I set them on fire and burned them all well, and then sprinckled water vpon them with a bosome, and with the same wet bosome quenched the fire: and so scattered abroad the coles here & there, alwayes sprinckling water vpon the till I quenched them: and thus I haue serued my purpose withoute so muche difficultie.

Moreouer, it is a verie profitable thing, yea and a necessarie, that I declare the maner and facilitie of beating it, soz to be able safelie to make a greate quantetie thereof. In olde time they were wonte to grinde gunpowder with certayne handemilles, as they vse to grinde cozne, but (besides the paine) it is a waye verie perrillous: soz that suche a composition grinde together with stones, will catche heate in suche wyse, that it will sone ingender fire, inespacially every thing being a matter disposed to fire: as also by rubbing together with violence a couple of baye stiches, you shall straighte waye kindle fire. Some grinde powder in suche milles as they vse to grinde crabbes or apples to make bargis or sider: and some hath it stamped in morters with a water mille or a hoisemill, whiche waye is the beste of all other, and mosse surest and also it is beaten finelie, and with lesse labour and payne: Some (that hath not the comodetie of water) make a greate wheele, deuised after such sorte, that with the cogges thereof it may raise by many heauy pestels, which falling, beate in vners morters of woodde made in a beame of oke, of the whiche there be some haue the botomes of baffe.

Some stampe with their armes, with a greate pestel  
 vi. tied



## The making

tied to the end of a pole with a corde, righte ener a mofte of wood or brasse, and so they beate the easeliter: other some beate it in a stone mofte, with the mofte fentie what large, with a wooden pestell, with the handell thereof made like unto a hammer or a mall. And forle, and other, that maye be made, is as much as aboute the darwise of bealing and making gun powder is needefull.

They haue vfed heretefore to waighe every matter by it selfe, and then they haue gone mingling and beating all together: There haue bene after, some that haue demised to beate every thing fencrallye by it selfe, and then mingelled altogether and made it. But finally the beste and moste readibicke waye, is to take a quantetie of Saltpeter, where with you will make youre pulder, and put it into a caldizen with so much water (as being set vpon the fire) maye be thought sufficiente to dissoule it: whiche so sone as it is refolued, muste be taken of and set on the grounde in a colde place: and the quantetie of beaten coles that is sufficiente, muste be put into it, and so stirring it aboute, muste be mingled well with the Saltpetr dissolved: and then taking youre brimstone finely beaten in powder, and with a stasse stirring aboute the coles and the Saltpeter, you muste strawe it finely vpon the same, as well as you can, with continuall stirring and mingling them together, whiche composition thus made, you muste then drie somewhat in the sunne: and then to haue it excellently well made, there needeth no other to be done, but to beate it all together, to the intent that it maye incorporate itselfe shelly, whiche done, you muste drie it with moste great diligence: and then sift it very well through a sieue, and moistning it againe with water or vinegar, stirring it somewhat together in a sieue, you maye to see it as alreadie hath bene declared: and then againe so to occupie it aboute  
your

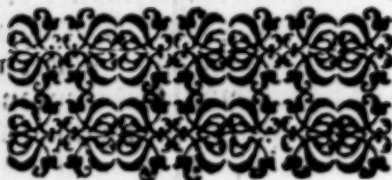


your businesse your melle dye it well : and so being dyed put it into dye vessels of wood to keepe : and set it in the highest places of your house, where few cometh for duncers respectes and though it were for no other, at least to keepe it drie. They that are expert, knowe good powder in this maner, by the colour: for that if it be very blacke, it is a signe y<sup>t</sup> it is made with very much coles: or that it is moyste : and when you rubbe it vpon a peece of paper it will blacke it moze then it ought to doe : and drawing it with your finger, you maye see whether it bee finely beaten or no: for it muste bee so much beaten that nothing, neither of Saltpeter nor of Wyinstone bee discerned in anye wise: for with reason they oughte not to bee seene: they take also for a triall, thre or foure coynes of powder, and laye them vpon a white Paper, distaunte thre fingers, the one from the other, and fire one of them: and if the powder bee good, you shall see them all to fire at ones: so that there shall bee no residue remaining, neither grossenelle of Wyinstone, nor of Saltpeter, nor of any other thing, and the paper not burnt.

And if it be not so sounde, they knowe that it is cupll made, or not good, but full of earthynesse of Saltpeter: or that it is moyst, so that it is naught for shooting of ordinance, besides the perill that it putteth them in. And vndoubtedlye naughtye powder, is a cost halfe cast awaye: and it is a great faulte in him that maketh it, or that causeth it to be made: for that in time of neede, it is of no effeate, and causeth muche shame to the Gunners, which occupie it: and therefore diligence oughte to be vsed, and good heed taken that it be made according as I haue taughte. There are manie whiche being vp lies, saying: that they can tell howe to make powder that shooting in gunnes shall make no noise, the whiche is impossible, the fire and the auerhientye encountering together. where beides that  
they

## *The making*

they are not able to do the same they saye, with a pæce of ordynance, they are lesse able to do it with one of those potgunnes of elder, that boyes vse to shut paper and floures in, by the noise of which, maye well be perceiued, that all pzoocadeth of bzeaking of y<sup>e</sup> ayze. Also there be manye that saye, that they can make white ponder, that shall not blacke ones handes, by putting in a certaine thing in the stæde of coales: some other, redde, with dyed red floures; and other blewe, with blew flowers: some other saye that to make the ponder of moze force and strength, that it is very good to put to euery pounce of bymstone an ounce of mercurie, y<sup>e</sup> bymstone being first put in by a litle, and a litle. Moreover there are some other that saye, that so to make the like, there ought to be put to euery pound of Saltpeter, a quarter of an ounce of Salt armoniack: some other therbe also, whiche saye that in the stæde of coales, it is better to take linen cloth and to burne it to tinder, and therewith to make ponder, whiche is moze excellenter then anye other coale that is possible to be vsed, about suche a purpose. And although that in my iudgement I haue declared already the best receites, that is so the making of all sortes of gunpowder, yet to the intent that it may be vnderstande howe much men haue trauayled and imagined to bying the same to all perfectiõ, I haue thought good to shewe here following diuers mos receiptes both good and bad, which so the making of ponder hath bene experienced of sundrie men.



*The first inuention and oldest maner*  
in making of sarpentine pouder, or pouder  
for ordinaunce.

1. Saltpeter	i. parte.
Wimstone	i. parte.
Coles	i. parte.

*The nexte practis of making pouder*  
for ordinaunce.

2. Saltpeter	lii. partes.
Wimstone	ii. partes.
Coles	ii. partes.

*Pouder for ordinaunce of a newer making.*

3. Saltpeter	v. partes.
Wimstone	iiij. partes.
Coles	iiij. partes.

*Pouder for ordinaunce not so olde.*

4. Saltpeter	xij. partes.
Wimstone	iiij. partes.
Coles.	ii. partes.

*Pouder for ordinaunce not verie olde.*

5. Saltpeter	ix. partes.
Wimstone	ij. partes.
Coles	iiij. partes.

*Pouder vsed of late daies for handgunnes.*

6. Saltpeter

## The making

6. Saltpeter  
Brimstone  
Colcs

liii partes.  
i parte.  
i parte.

Powder for ordinaunce used not  
so long ago.

7. Saltpeter  
Brimstone  
Colcs

ix partes.  
iii partes.  
r partes.

¶ Powder for ordinaunce used of latter daies.

8. Saltpeter  
Brimstone  
Colcs

c partes.  
r partes.  
xxxv partes.

¶ Grosse powder of a newer sorte.

9. Saltpeter  
Brimstone  
Colcs.

c partes  
ix partes.  
xxvii partes.

¶ Fine powder of a making not very old.

10. Saltpeter  
Brimstone  
Colcs

ix partes.  
iii partes.  
v partes.

¶ Grosse powder of a newer making.

11. Saltpeter  
Brimstone  
Colcs.

li partes.  
i parte.  
xxi te.  
Bartha.



**Parabur powder of  
a newer making.**

- |                      |               |
|----------------------|---------------|
| 11. Saltpeter        | liij. partes. |
| Whitstone.           | i. parte.     |
| Coles of whitewickes | i. parte.     |

**Fine powder of a newer making.**

- |                              |             |
|------------------------------|-------------|
| 13. Saltpeter often refined  | vi. partes. |
| Whitstone                    | i. parte.   |
| Coles of young basell wickes | i. parte.   |

**Grosse powder of a newer making.**

- |                       |               |
|-----------------------|---------------|
| 14. Saltpeter refined | liij. partes. |
| Whitstone             | i. parte.     |
| Whitewickes           | liij. partes. |

**Powder of a newer making.**

- |               |               |
|---------------|---------------|
| 15. Saltpeter | x. partes.    |
| Whitstone     | liij. partes. |
| Whitewickes   | liij. partes. |

**Harkabus powder used now & adays.**

- |  |            |
|--|------------|
| 16. Saltpeter very often refined                 | x. partes. |
| Whitstone  | i. parte.  |
| Coles made of basell wickes with the bark pulled | i. parte.  |

**Handegns powder of a newer making**

- |                       |               |
|-----------------------|---------------|
| 17. Saltpeter refined | xvij. partes. |
| Whitstone             | liij. partes. |
| Coles                 |               |

## *The making*

**Coles of basell hauing their rindes pilled of. iiii. partes.**

¶ Handgun powder of a stronger and of  
a newer making.

18. Saltpeter refined	vij. partes.
Sulphure.	i. parte.
Coles of young basell	i. parte.

¶ Finer and stronger handegun powder.

19. Saltpeter diuers times refined	viii. partes.
Sulphure	i. parte.
Coles of young basell twiggess hauing their rindes pil- led of	i. part.

¶ Grosse powder vsed novve a daies.

20. Saltpeter	liij. partes.
Sulphure	i. parte.
Willowe coles	i. parte.

¶ Grosse powder vsed novve adayes.

21. Saltpeter	xx. partes.
Sulphure	liii. partes.
Willow coles	v. partes.

¶ Handegun powder vsed novve a daies.

22. Saltpeter refined drie	xlviij. partes.
Sulphure cetrine	vii. partes.
Basell coles	li. partes.

Handegun powder vsed novve adayes.

23. Saltpeter refined	xlviij. partes.
Sulphure	ii. partes.
Basell coles	lii. partes.
	℞

The maner that is vsed of charging and shooting  
of ordinaunce. Cap.xxv.

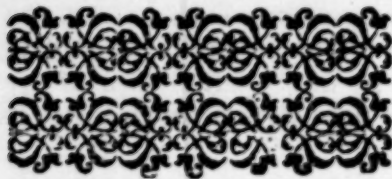


Or asmuche as if Gunners  
should chaunce to bee slaine  
or otherwise lacking, to the  
intent that euery souldiour  
in time time of neede maye  
knowe how to serue in one  
of their stades, I haue  
thought good and necessarye  
to shew and declare the ma-  
ner of charging & shooting

of peeces of ordinaunce. Wherefore it ought to bee un-  
derstande, howe muche powder is occupied at once in  
charching of euery peece, whiche moste commonly, is  
is two thirde partes, of that which the shotte or bullet  
thereof wayeth: as for example if the bolet of a peece  
of ordinaunce waighe .vii. pounce, then there must bee  
taken .xiii. pounce of powder for the iust charge of the  
same peece. And then with a long stasse that hath at  
the one ende a bob as big as the bolet of the peece, and  
at the other ende a lable made for the same purpose  
that will take so muche powder by at twise or thise, as  
is aforesayd, the peece must be charged, after this sort.  
Take the lable full of powder, and thrust it into the  
Gunne so farre as it will go, & then turne your hande  
with the lable that the powder maye fall out & remaine  
there behinde when you pull out your lable: whiche  
done, you muste with the bob ende thereof, thrust the  
powder home faire and softely: and so with the lable  
taking by the rest of the powder you must doe likewise,  
and thrust after at the last a wispe of hey or of some  
thing els, to sweepe all the powder together, and then  
the bullet whiche muste bee of a fit biggnesse for the  
peece: And also an other wispe to stave the bollet for  
roling oute: and putting some powder in the touchehole  
and aboute the touch: hole, the Gunne is then charged.

## *A discourse*

Howe to leuell it, a man must stande directly behinde it, and with a leuier, tourne it this waye, or that waye till suche time as it be broughte to lie iuste, as a man will haue it, so that looking straighte from the breeche or hinder parte of the peece as lowe as maye bee vpon the vpper parte thereof, he maye see the mouth of the peece to lye euen with the marke and as it were to couer it: whiche done, if the grounde wheron it standeth, bee euen, as it is requisite to bee, and that the one whele stande not higher then the other, giuing fire to it with a linte stocke whiche is a matche fastened to the end of a staffe of a yarde or two yardes long, you shall see the shot to strike the same thing that you shot at, if it bee within anye reasonable distance. And for more spacie shooting of ordinaunce, the iuste charge in powder of euery peece maye as aforehabe be prepared in a reabincse, and put in bagges of linnen or in great papers made for the same purpose, whiche in a sodaine maye be chopt into the mouth of a peece with the bollet or shot thereof, of thrust after, as farre as they will go, and then thrusting a long wyer into the touchehole that maye perse through the bagge or paper wherein the charge of powder lieth within the peece, filling the same touchehole with corne powder so soone as it is leueled. it maye incontinent be shot of: whiche maner of charging is done most quickly and a great deale sooner then any other waye, and when haste requires, very needefull.





¶ How to get out quickly the nailes that should happen by treason, or otherwise to be driuen into the toucheholes of ordinaunce.

Cap. xxvi.



If it shoulde fortune at some sodaine assault, the toucheholes of the artillerie to be nayled vp, after suche sorte as they cannot be discharged, or shot of, the speedie waye to vnnayle them, is firste to charge againe all suche peeces of artillerie, with smaller bulletes the their ordinarie: and when they are so charged, to leuel them towarde those places where neede requirys, euē as they shoulde haue bene, if they had not bene nayled: and then there must be made a traine of powder, along the bottome of the canes, from the mouthes to the bollettes of euery pece of ordinaunce: and to the intente not to shote them in vaine, you maye tarrye for occasion, and occasion seruing to shote them, you maye giue fire at their mouthes, where besides that they shall doo their ordinarie effectes, they shall all in the discharging, be vnnayled, blowing oute the same nailes or pinnes of yron, wherewith their toucheholes were stopped: and so doing, of suche nailing there shall happen no great harme. But if some of them for beating beating in harder then other, shoulde chaunce at the first not to be driuen out, then the remedye is, to charge them againe, & to shote them of, after the saide maner, putting on the toucheholes a litle oyle made very hot, heating also first the place that is nailed, with a burning coale, making mo:reouer with claye, vpon the pece, a litle cuppe aboute the hole, that maye holde the hot oyle that is poured vpon it, after suche

¶ ij.

sorte,

## A discourse

softe, that through the heate thereof, it maye soke into the hole with the yron in it, whereby the same yron shall then be made so slippery, that at the next discharging of the peece, the fury of the fire most easly shall blow it oute.

¶ How much the artillerie ought to be esteemed of the armies novv a daies, and whether the same opinion of them whiche is had vniuersally, be trewve,

Cap. xxvij.



Onsidering howe many battailes and deedes of armes, were made of y<sup>e</sup> Romanes at sundrie times, there is come vnto mee in consideration, the vniuersall opinion of manye men, which is, y<sup>e</sup> if in those times there had bene ordinaunce, the Romanes should not haue bene able to haue conquered, no; so easly haue won the coutries, and made the people their tributaries, as they dyd, no; they should not haue in any maner made so mightie conquestes. They saye also, that by meane of this instrument of fire, men cannot vse, no; shewe their strength and vertue, as they might in olde time. And they adde a third thing, that they come with moze difficultie to fight a field then they came in those daies, no; their cannot be kepte in them the orders of those times, so that at length the warre shalbe broughte to consist altogether in artillerie. And minding to write, whether such opinion be true, and howe much the artillerie hath increased, or deminished the strength of armies, and whether it taketh awaye, or giueth occasion to good Capitaynes to do valiauntlye, I will begin

beginne to speake concerning their firste opinion, that the auncient Romaine armies shoulde not haue made the conquestes whiche they did, if the ordinaunce had bene in those dayes. To which answering I say, how that warre is made eyther to defende, or to offende. Where first it is to be examened, to whom these two manner of warres causeth mosse profite, or most hurte. And albeit there is what to say of either part, notwithstanding I beleue, that withoute comparison, they do moze harme to him that defendeth, then to him that inuadeth. The reason is, that he y defendeth, is either in a towne, or in a campe within a trench. If he be within a towne, this towne is eyther littell, as the mosse parte of fortresses are, or it is greate. In the first case, he that defendeth, is altogether losse: for that the violence of the artillerie is suche, that there is no wall, how greate so euer it be, which in few dayes it battereth not down. And if he that is within, haue not space inoughe to retire, bothe with ditches, and with rampiers, he is ouer come, becuse he is not abel to withstand the violence of the enemye, whom throughe the breache of the wall, will after enter: nor in this case, the artillerie whiche he shoulde haue, shall not helpe him: for that this is a generall rule, that where men in a thong, & with violence may go, y artillerie cannot withhold them. Wherefore in the defence of a towne, the furie of the enemies cannot be withstand. Though the assaultes the which are not thonged, but scattered, which be called skirmishes be easely withstode. And they whiche go with this disorder, and coldnesse to a breache of a walle, where artillerie is, do go to a manifeste deathe, and agaynst them the artillerie preuaileth: but those, which assault a breache in a thong hard together, so that the one thrusteth forward the other if they be not holden oute of ditches, or of rampiers, they enter in euery place, and the artillerie keepeth them

## *A discourse*

them not backe, and though some be slaine, they canot be so many, that they shall not let the victorie. This is knowen to be trew, by many expugnations of townes made in Italy, and in especiallie in the same of Brescia: for as much as the same Towne being rebelled from the frenchmen, and yet the fortresse being kept for the king of Fraunce, the Venetians for to withstande the violence, which from the same might come into the town, had laid all the streete full of Artillerie, which descended from the fortresse to the Citie, & they planted them on the fronte, and in the flankes, and in enery other fit place. Of the which Mounſier de Foix made no other coupte, but with his squadrons, coming downe on foote passing through the middelt of them, gotte the citie: no; it was not knowen that he receiued by those any notable hurte. So that he that defendeth him selfe within a littell Towne (as hath bene sayde) and findeth the walle on the grounde, and hath not space to retire with rampiers, and with ditches, and is constrained to truste vpon the artillerye, is overcome straight way. If thou defendest a great town, & where thou hast commoditie to retire, yet notwithstanding withoute comparison, the artillerie is moze profitable to him which is withoute, then to him that is within. Firſt, to minde to haue a peece of Artillerie hurte those without, thou art constrained to gette thee by with it from the playne grounde of the Towne, because standing vpon the plaine grounde, enery littell bancke and rampier that the enemy maie make, shall cause him to remaine safe, and thou canst not hurte him, so that being dynen to stande a losse on the toppe of the walle, or in what so euer other maner on highe, thou dyest after the two difficulties. The firste is, that thou canst not bying by so greate and mightye peeſes of artillerie, as he withoute may shote, being not able in littell spaces to handell great thinges. The other



other is, that although thou couldest bring them, thou canst not make such strong & sure defence for to save the said artillerie from dismounting, as they without may doe, being on the ground, and having that commoditie & that room, that they themselves like. So that it is impossible for him that defendeth a towne, to keepe the artillerie on high places, when they which are without have great ordinance enough. And if they be driven to come with the on lowe places, they become for the moste parte unprofitable, as hath bene sayde. So that the defence of the citie, is brought to be defended with armes, as in olde time they did, and with small artillerie. Of which if there be gotten a littell profite (having respecte to the same small artillerie) there is gotten so much incommoditie, as counterpeaseth the commoditie of the artillerie: for as much as having respecte to the same, they make the walles of townes low, and as it were under ground in ditches, so that so sone as they come to the battaile at hande, eyther because the walles are battered, or because the ditches are filled up, he which is within, hath much more disadvantage, then he shoulde have had in times past. And therefore (as afore is sayde) these instrumentes helpeth much more him that besiegeth a towne, then he that is besieged. Concerning the thirde thing, to lye in Campe within a trenche, to the intente not to fighte the felde but at thy commoditie, or advantage, I saye, that in this parte thou hast no more remedy ordinarie to defende thee from fighting, then they had in olde time. And sometimes, considering the artillerie, thou hast greater disadvantage: for that if the enemye meete with thee, and have a littell advantage of the countrey, as may easely chauce, and finde him selfe higher then thou, or that in his coming thou hast not yet made thy banckes or rampiers, and covered thee well with those, straight waye, and before thou hast anye remedie

dis

## *A discourse*

die, he vnlodgeth thee, and thou arte constrained to issue oute of thy fortresse, & come to fight: the which happened to the Spaniards in the battaile of Rannenna, whom being fortressed betwen the river of Ronco, and a bancke, because they lay, not so highe as sufficed, and so; that the Frenchemen had a littell the aduantage of the ground, they were constrained of the artillerie to issue oute of their fortresse, and come to fight. But admit that the place, which thou hast taken with the campe, were muche higher, then the other againste it (as so; the most part it ought to be) and that the bankes or rampiers were good and sure, so that by meanes of the situation, and thy other preparations the enemy durst not assaulte thee, it shall come in this case to those maners, which in olde time it came, when one was with his army in place not possible to be hurt: the which are to ouer run the countrie, to take, or besiege the townes that are thy friends, to stoppe thee thy victuals, so that thou shalt be constrained of some necessitie to vn lodge, and come to fight the field, where the artillerie (as hereafter shall be sayde) doth not muche hurte. Considering then what kinde of warres the Romaines made, and seeing how they made almoste all theyr warre to innade other men, and not so; to defende them selues, it shall be seene (when the things sayde afoze be trew) how they should haue had moze aduantage, and muche sooner should haue made their conquestes, if ordinance had been in those daies. Concerning the seconde thing, that men cannot shew their strength, as they mighte in olde time, because of the artillerie, I saye, that it is trewe, that where men scattered do shewe it, they stande in moze perill, then in those daies, when they had to skale a Towne, or to make like assaultes, where men not thonged together, but seuerally the one fro the other did appeare.

It is also trewe that the Capitaines, and heades of armies

armies. stande more subiecte to the perrill of death: then in those times, because they may be reached with artillerie in all places, no; it helpeth not them to bee in the rerewardes, garded with mosse strong men. Not withstanding it is scene, that the one and the other of these two perrills, do seldome times extraoꝝdinarie hurtes, so; that the Townes well appointed and furnished with munition are not scaled, no; they goe not with weake assaultes to assaulte them: but minding to winne them, the matter is brought to a siege, as in olde time they did. And in those, which neuerthelste are won by assaulte, the perrills are not much greater then they were in those daies: so; that also in those times, they which defended a toun, lacked not thinges to thow and shote, the which (though they were not so furins) they did concerning the kylling of men the like effecte. Concerning the death of Capitaynes and conducters, there hath been in. xliij. yeares that the warre was of late dayes in Italy, lesse examles, then there was in .x. yeares with the antiquesse: so; that excepte Counte Lodouike of Mirandola, who died at Ferare, wher the Venecians, a few yeares ago, assailed the same state, and the Duke of Nemours, which died at Cirignuola, there hath not hapned of the artillery any to be slaine: so; as much as Monsieur de Foix at Rauenna, died of yron, and not of fire. So that if men shew not perticularly their strengthes, it groweth not of the artillery, but of the haughtie orders, & of the weakenes of the armies, the which altogether lacking strength, cannot show it in parte. Concerning the third thing sayde of them, that men cannot come to hande strokes, and that the warre shalbe brought to stand altogether vpon artillery, I saye, that this opinion is altogether false: and so alwaies shalbe taken of those, who according to the auuncient vertue will occupie their armies: so; that he that will make a good armie, it beho-  
meth him with exercises, eyther sained. o; trew, to accus-



## of Muynes.

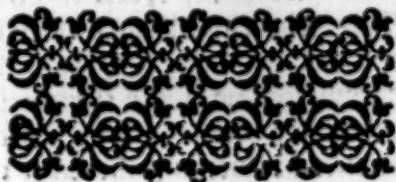
to me his men to geue the charge on the enemy, and to come to the swordes pointe with him, and to the grasping by the bosome: and he ought to grounde him selfe more vpon the footemen, then vpon the horsemen. And when he shall ground him selfe vpon the footemen, and vpon the foysesayde manners, the artillerie becommeth altogether vnprofitable. For that with more facility, the footemen in approching nere the enemy, may auoide the shot of the artillerie, then they were able in olde time to auoide the violence of Elefants, of cartes full of bowes & of other strange incouters, which y Remaine footemen encountered withall, against which, alwayes they founde the remedie, and so muche more easilie they should haue found against this, the shorter that the time is, in the which the artillerie may hurte thee, then the same was, in the which the Elefantes & the cartes were able to hurte: for as much as they in the middle of the fight, disordered men, these onely before the fight trouble men: the which impediment the footemen easily auoide. either with going conered by the nature of the situation, or with falling downe vpon the ground, when they shote: the which also by experience hath bene scene not to be needefull, in especially to be defended from greate ordinaunce, the which cannot in such wise be uelled, because if they go lowe highe, they touche thee not, & if they go lowe, they will not come nere thee. When the armie being come to handestrokes, this is more cleare, then the lighte, that neither the greates, nor the littell can after hurt thee: for that if the same, which hath the artillerie, be before, it becommeth thy prisoner, if it behind, it hurteth the friends before thee. Again on the backe it cannot hurte thee after such sorte, that thou art not able to go to winne it, and it cometh to follow the sayd effect. For this neede not much disputacion: for that there hath bene scene the example of the Swizers, who at Pauara in the yere of our Lord. 1513. without artillerie,



artillerie, and withoute horse, wente to incounter the  
 frenche army furnished with artillery within their for-  
 tresse, and they ouerthrew the withoute hauing any im-  
 pediment thereby: and the reason is (besides the thinges  
 tolde afoze) that the artillerie myndoing to haue it worke,  
 hath neede to be garded eyther of a wall, or of ditches,  
 or of banckes. And when it lacketh one of these gardes,  
 it is taken, or becommeth vnprofitable. as it happeneth  
 when it is defended with men, for when they chaunce  
 to be in a battail, and in the fight on the lande, they can-  
 not be occupied by flanke, but in the same maner, that  
 the antiquitie occupied the instrumentes to shewe, which  
 they placed oute of the squadrons, for that they shoulde  
 fight out of the orders, and alwayes whē eyther of horse  
 men, or of other they were charged vpon, their refuge  
 was behinde the legions: he that otherwise maketh ac-  
 compte of them, hath no skill, and trusteth vpon a thing,  
 which easely may deceyue him. And though the Turke  
 by meanes of artillerie, against the Sophi and the Sol-  
 dan, hath had victorie, it hath not happened through other  
 meanes, then through the feare that the horsemen were  
 put in by the straunge rumour thereof. Wherefore to  
 make an ende of this discourse, I conclude, that the artil-  
 lerie is profitable in an army, when the auncient  
 vertue is mingled therewith, but withoute  
 the same, against a puissant army,  
 it is moste vnprofitable.

B. ij.

¶



## of Muynes.

¶ Of Muynes and placing of powder vnder grounde,  
wherewith inuincible tortrelles, by fire maye be  
ruinated, when ordinaunce cannot  
bee brought vnto them.

Capi. xxviii.



He better and greater quan-  
tietie of powder which is put  
in a Caue that is made to o-  
uerthrowe a Foyle or Castel,  
the greater vndoubtedly shal-  
be the effecte thereof: which  
caue is best to be made a good  
waye within the ground, and  
in a harde place, to the intent  
that when the same is shutte  
& well walled vp, the fire be not able easely to haue any  
other waye oute, then in ouerthrowing the thinge y<sup>e</sup> is to  
be ruyned. so; as much as if the aire, & the fire in y<sup>e</sup> roome  
of that inclosed place, may haue meanes to breathe out,  
the force therof wilbe of no effecte. Also it wolde be take  
hede of, that the caue be not by no other meanes made,  
so that the fire maye breake oute: : so; which cause, it  
ought to be made, with the beginning thereof some what  
distant fro the place, that you minde to ouerthrow: to the  
intent that in making thereof, the men of the same place  
do not issue oute to let you, nor perceiue the certayne  
place of the hurt, to be able to provide so; it, and to make  
counterminyes to let the fire breathe oute and pas with-  
oute anie effecte, whereby all youre coste and laboure  
may become vaine. Wherefore they make these mines  
the moste narroweste and moste crookedest that maye  
be, and in especially nere the very place that is ap-  
pointed to be ouerthrowen, and therefore vnder such a  
place there muste be digged a hole that maye be at  
leaste

least three yardes high or more, and two yardes broad  
and that the entrie vnto it be undergrounde in the  
maner, as by this presente figure you maye see descri  
bed.



And in this to put barrells w<sup>th</sup> their heades knoc  
ked oute full of good strong powder, betwene which you  
must also strawe powder ynough vpon the bozdes wher  
on they stande, laying to it a good great mathe made of  
cotton, boyled in vinegre, bymstone, and Saltpeter,  
whiche muste be well roled in good serpentine powder  
well dyed in the sunne: and hauing laide it to the place,  
you must make a trayne of powder vpon it, euen to the  
going out, so that it may be couered therewith: placing  
it in pipes of earth or tronkes of wode in the place of  
the entrie therof: & that done, you must wall it by most  
strongly, laying ouerthwarte great blockes of oaks or  
other wode: so that with those & with the wall, it maye  
be strong to resiste the furye of the fire, as muche as  
is possible: and the entrie in suche maner made vp and  
soyted, when you shall thinke it time to bring the  
effect

## of fireworkes.

effecte to pas, to destroye the aduersaries, or to make a ruine, you may cause the trayne to be set on fire, where you shall see a maruailous and horrible effecte followe. For aboute this matter I neede not to declare sauing that if it shoulde chaunce the myne to be made in a stonie place, where the stones will fall downe, that then the best is to vnderprope them with pipes of wood filled full of powder.

¶ The maner how to make trombes or trunkes of fyre, as well to assaulte as to defende a breache, or gate, and to set a fyre a towne or Campe or anye thing else.

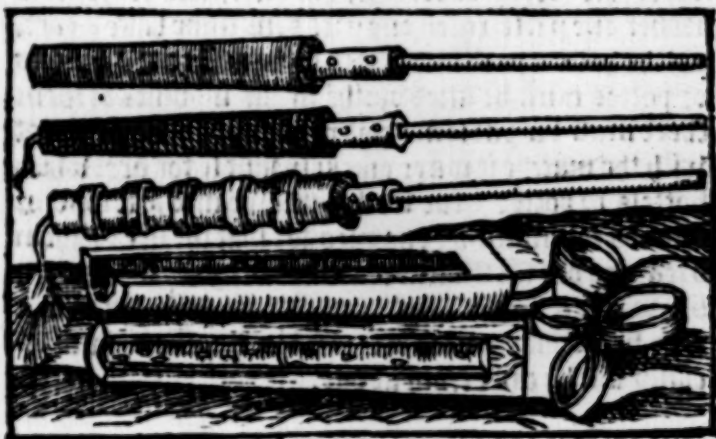
Cap. xxix.



First cause a cane of good wood to be made at the corners as big as a mans thigh and the length of an ell, after such sort that þ hole therof be as wide that a man may thrust in his naked arme, and cause that the bottom of the sayd tricke be made in such wise with a little hole, that the staffe of a partesan may enter into it, and so to be made fast therunto, binding the sayde tricke with yron wyre at both endes, and in the myddest soz moze suerty that it bryake not, througþ þ fury of the fire. When fil it with this mixture heresfollowing. Take serpentine powder iiij. pound rosen i. pound, caphere half a poude, beaten glas iiij. ounces, & mingle euery thing together, then begin to fil and put in the trumbe a handefull of serpentine powder vnderste, nexte a handefull of the foresaide mixture, after a litle powder, then a stoppell of cotten wet in oyle of gineper, and put in vpon the sayde cotton as you haue done at the firste, that is to saye powder, and then mixture



ture &c. And thus you must doe till you haue filled it full,  
 stamping in the stuffe alwayes lightly, and if for lacke  
 of ginsper oyle you wet the cotten in aqua vita, it is very  
 good putting after euery quantitie of powder a litle quick  
 siluer, then when it is full, put in the mouthe some good  
 powder, making it a single corner of parchement bound a-  
 bout with packthreed, & with a litle hole in the midst of  
 the parchement, wherein you muste put a matche made  
 with gunpowder, the whiche casily and quicklye with  
 your common matche may kindle the fyre, being come  
 to the face of the enemy: whiche is an excellent thing  
 for the sight on the sea, or for to disorder a band of horse-  
 men.



¶ Howe to make bottels or pottes of fyre worke  
 to throwe into shippes or among men  
 that are in battelraye.

Cap. xxx.

## of fireworkes.



Vch earthe bottels or pottes as is commonly bled to kepe vineger oz oyle and such like is best for this purpose, whiche muste be filled with this composition: serpentine powder two partes, rosen one parte, pytche one parte, bea-ting mosse finelie, all these things together in a moxter, then take turpentine, & a litle gineper oyle, oz linsæde oyle, and mingel them therewith in a caudron vpon the fire with a sticke of a yerde long, and fill the bottels half full of this foresayde receipt, that done, take serpentine powder one parte, rosen one part, bymstone halfe a part, pytche halfe a part, and of this last mixture the bottels oz pottes must be filled by: the in the monthes of them there must be put some good powder, to the intent that with the matche it maye quickly kindle the fire: whiche bottels oz pottes serue well to throwe into a towne oz out of a towne among enemies. so: that the fire of them breaking out flicth all abroad and burneth most horribly where it lighteth, but good haue must be taken that it be first well kindeled before it be throwen, in especially if it be caste from aboue.

¶ An other composition of fire worke.

Cap. xxx.



Anse as manye earthen bottels oz pottes to be made as you liste to haue, whiche must be as it were but halfe baked, then fill them with this mixture following, serpentine powder three partes, Saltpetre one parte, turpentine halfe a parte, pytche halfe a parte, bymstone one parte, baye Salte halfe a parte, and

and when you will throwe them, set them on fire and see that they be well kindled.

¶ Balles of mettell to throwe among men in battelraye or otherwise, which breaking shall doo wonderfull hurte.

Cap. xxxii.



O disorder and to make the enemies to give place, there maye also be provided, certaine hollow balles of mettell as bigge as small bones, and a quarter of an inche thicke, caste in mouldes and made of thre partes of brasse and one of tinne: but the brasse oughte to be molte before the tinne be put to it, whiche balles filled halfe full of fine corne powder, and the other halfe full, of serpentine powder mingled with rosen beaten into powder, so that for thre partes of serpentine powder there be one part of rosen, and then putting in the mouthes of the holes of them a litle fine corne powder to make the rest to fire the soner and after being fired and throwen, they will breake and flye into a thousande peeces, and both hurt & kyll whom so ever is nere or aboute them. Wherefore they are verie good to throwe over the walles into a towne or fortresse, or into a campe, to hurte and to give a terrour to those that are within: but these balles after they are fired and well kindled, and having blowne a litle, must be quickly throwen, least they hurt such as would hurle them: and therefore the experience of one, ought first to be made in a close place, to see howe long it will tary before it breake, & the holes that it will make in divers places, whereby the other maye the better be knowne howe to be used.

L.i.

Howe

## of fireworkes.

¶ The maner how to prepare pottes and balles  
of fyreworke to throwe with hande.

Cap. xxxiii.

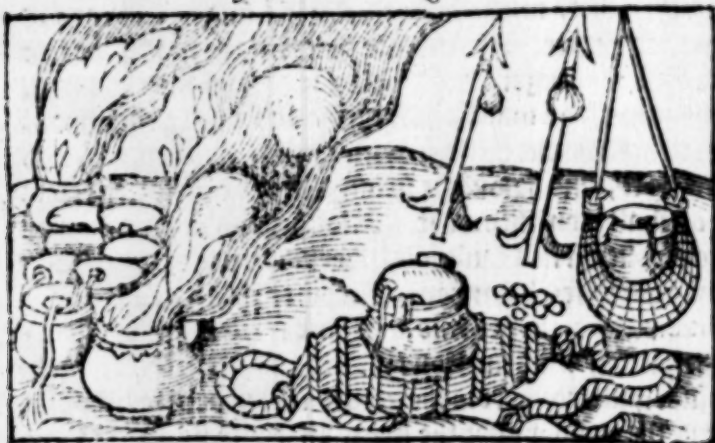


N the world there hath bene  
alwayes men of such pzeng-  
nant wittes, that haue excels-  
led in sundry and infinite in-  
ventions, as well for the sa-  
uegarde of humane bodies  
as also for the destruction of  
þ like. By whose helpe there  
haue borne Capitaines, whi-  
che imitating their counsellors  
haue caused their footemen to carie in their handes, cer-  
tayne earthen pottes and balles, filled full of a certayne  
composition of powder, or some vntius liquoz, apte to  
take fire quicke quicklye: with the whiche incountering  
the enemies in battaile at hande, haue bigozously whoz-  
led those among them, for to pzoue, whether with suche  
meanes they might be able not onely to disorder them,  
but also to make them giue place, and to ouerthrowe  
them: for as muche as suche fyrewozkes will maruay-  
lously hurte the enemies not onelye with the smoke of  
them, but also a great deale and muche moze with the  
horrible and vnquenchable burning of the, so that ther-  
by suche men haue alwayes had moste happye successe,  
with moste glozious laude and prayse. These fyre-  
wozkes are made in this wise: Take as many earthen  
pottes or bottelles as you liste, caused to be made  
for this purpose, either baked or unbaked whiche ma-  
keth no matter, so that the moistenesse of the earth be  
dried by: and these muste be filled halfe full of serpen-  
tine powder, and somewhat moze: and the same pon-  
der muste be mingled with pytche and brimstone bea-  
ten to powder to the quantity of the thirde parte there-  
of;



of: then there muste be put vpon it a finger thickness of hogges grease, to the intente that it maye make the fire to dure the lenger and it being in this maner ordered, there must be made a hole into it and a peece of gunpowder matche put therein, with a littell good powder, and firing it, and holding it so long till it be well kendeled, you shall then throwe it. Also there is made a liquide composition in a cauldron, wherein is put hogges grease, oyle of stones, byimstone, saltpeter twice refined, aqua vita, pytche, turpentine and some serpentine powder: & the pitche, the byimstone, and the Saltpeter being liquide, putting thereto the grease, the turpentine, the oyle, and the powder ouer the fire, all muste be stirred and mingled together very well in an earthen pot, or some other thing prepared for the same purpose with a sticke, to the intente that it maye the better incorporate: and then it muste be couered aboute with good powder, that it maye fire the easelier when you will haue it. And that done, you may occupie it when you wil, and wholye it either with a sling, or with a corde tied vnto it, or otherwise with the hande as you shall thinke best: also of this composition they maye be filled certaine littell purses of linnen clothe, which being bounde about with a corde wilbe fashioned lyke a ball: and these maye be whorled or shotte oute of trunks of fire, or otherwise as shall please him that maketh them. Also with this composition maye be annointed whatsoeuer a man wold haue quicklye burnt, as Gates of Townes, byldges of wood, cartes, monitions, and such like, for that it is a matter that will sone kendeled and set a fire any thing, and also able to maintaine it: moreover littel ballcs thereof maye be tyed to the heades of dartes to throwe among the enemyes, or where one wold haue any thing fired.

of fireworkes.



Howe to make balles of wilde fire , to shoote in  
ordinaunce or to throwe with  
handes.

Cap. xxxiiij.



Ake serpentine poudre five  
partes , Saltpeter refined  
thre partes , brimstone two  
partes , Masapina one parte,  
Camphere halfe a part , tur-  
pentine halfe a parte , halfe a  
part of glas grossly beaten,  
baye Salte halfe a part, half  
a part of oyle of stones , and  
oyle of linte seide , as muche  
of the one as of the other, Aqua vitæ half a part, and all  
these things being mingled together very well, take the  
a peece of canuas as bigge as you will make the ball  
and make it like unto a purse, and fill it with the sayde  
mixture , and then make two or thre holes therein  
with a rounde yron somewhat bigger then a bod-  
kin,

of fireworke. Fol. 43

hookin, and put in euery hole a litle sticke.

And it is to be vnderstande that this foresayde mixture may be also made vpon the fyre in a cauldron, and the balles that are made thereof must be rouled in serpentine powder, and then in the mixture, often times couering them with Tye, well plaistered on, of a good thicknesse, then when they shalbe a litle dried, take the said sticke out of the holes, and fill them halfe full of serpentine powder, and the other halfe with roze powder, and giuing fire to the saide balles, and throwing them among the enemies, they will do maruaylous & wonderfull hurte. For that the sayde balles will burne within the water, so that falling vpon the armour of souldiours, water cannot queneche them nor any thing else, except aboundaunce of myre or hurte. And adding to the saide mixture that is vnsoo halfe a parte of beaten glas and halfe a parte of baye Salte, you maye fill a trumbe therewith after the maner as I haue taught a litle afoze.

To trime Targettes with fireworke to assaulte,  
or to defende a breache.

Cap. xxxv.



Et pipes of brasle as manye as you list, and nayle them vpo a target, either fyre viij. or x. and fill the sayde pypes full of the foresayde mixture vnsoo, & order the pypes after suche sort that they fyre not altogether, but one after an other, so when one is almost burned oute, the same maye geue fire to an other by a litle pype as small as ones finger, that muste go from the bottoime thereof to the mouthe of an other, and so successiue to all, whiche shall continue a long tyme, but the sayde target must be

## *of lutum sapientia.*

be couered with blacke buckeram that the fyrewozke  
bee not perceyued and the giuing of fire the one to the  
other.

¶ To make an other kinde of fireworke.

Cap. xxxvi.



**T**he willowe coles, Saltpeter, aqua vitæ,  
ozimstone, pitche, resapina, Camphre,  
oyle of stones, vernice liquide, turpentine  
is much of y<sup>e</sup> one as the other, mingling e-  
uery thing together, & the take a litle purse  
of canuas, & fill it full of serpentine powder, & couer the  
purse all ouer with the foresayde mixture of a good thic-  
kenesse, and with as muche Toe as you shall thinke  
good, and then make a hole that maye go to the middell  
of the balle, whiche muste bee filled full of powder, so that  
therby all the composition therof with a matches maye  
be set on fyre when you list.

¶ How to make a mixture in stone that shall kin-  
dle fire with water or spittel.

Cap. xxxvii.



**T**his stone is very necessary for a Captain  
to giue fire to his gunners, when through  
foule wetther, all their matches shoulde  
happen to go oute, and where they can-  
not kinde the againe because of the raine.  
First take vnslaked lime one parte, Tutia alexandrina  
vnprepared one parte, Saltpeter very well refined one  
part, quicke yimstone two partes, Caphere two partes  
calamite stone one parte: All these thinges muste bee  
well beaten and sifted, and bounde harde together with  
a peece of new linnen cloth, & put into a cople of earthen  
cuppes, such as Goldsmithes vse to melte in, the  
mon



mouthes of whiche muste be ioyned together and faste bounde with yron wyre, and daubed ouer with lutum sapientia that it bzeathe not out, and then dried a litle, till it become yelowre, that done, put it into a sozneys where they burne bzicke oz earthen vessels, and let it tarpe therin as long as the bzicke oz earthen vessels be a baking, and then taking it out, you shal see it made like vnto a bzicke stone.

¶ To make an other kinde of stone to kindle fire with water or spittell.  
Cap. xxxviii.

**T**Ake Camphere thre partes, Saltpeter well refined two partes, vnslaked lime two partes, bzim stone two partes, all these things (being well beaten together, and put into a cople of golde smithes melting cuppes well stopped with lutum sapientia) must then be baked in a sozneys, and when the earthen vessels be taken oute, this shall also be made.

¶ Howe to make lutum sapientia.  
Cap. xxxix.



Ake of the best white potters earth that you can gette, for in one place there is better then in an other, that is to saye, of that whiche can best endure the fire, as suche as they make pottes of in Padua, and likewise in Germany: for it is of suche perfection, that the Pottes, whiche be made of it, and wherein that they dresse their

## *of lutum sapientia.*

their meate, may also serue to found metalles in. Take then of the beste, and specially if it must serue for a thing that hath neede to be long vpon a greate fire, otherwise, take suche as you can get. There is founde of it, that is of a graye colour, as the common softe is, and also there is white, that men vse in some place of. Vicence, which is like loanes of Gypsum, or plaister, and is called of the Italians Florette de Chio. We here in Englande vpon the vse thereof, may geue it what name we will. Potters vse of it in Venise, for to whit the dishes, and other thinges, before they vernishe or pollish them.

There is also founde of it that is redde, as in Apulia, where there is greate quatetie, and that they call Boale, and is the very same that some Apoticares doe sell for Boale Armenick, & the Venecians vse of it, for to paint redde the sozefrontes of their houses with lime, brycke, and Vermillion, couering it afterwarde with oyle of line. This redde earth is the fattest, and the clammiest of all the rest, and therefore it cleaueth soonest by the fire, if it be not tempered with some other substance. And because that all the sayde earthes be to fatte, the one moze than the other, therefore meene put to them some leane substance. Nowe, if you take of that of ashe colour, whiche is moste comen, and the least fatty, you maye compose and make it in this maner. Take of the saide earth foure partes, of cloth-makers flore or shearing, one part, ashes that haue serued in a buck, or other, halfe a parte, brye horse dung, or the dung of an Asse, one part. If you will make it paster, put to it a fewe stamped bryckes, and sparkes of yron: let all these thinges be well stamped, and sifted, that is to saye: the earthe the ashes, the bryse dung, the bryckes, and the sparkes of yron: than mingle all together, and make it into earth, and make a bedde thereof, vpon the whiche you shall caste by littel and littel, the flore, as equally as you can. This done, powze to it water,

ter, styng it well first with a sticke, & then with a pale, let bzoade at the ende. And when all is well incoꝝpoꝝated together as you woulde haue it, laye it vppon some great boꝝde, and beate it well, and that a good space with some great staffe oꝝ other instrument of yꝝon, mingling and steering it well, foꝝ the lenger you beate it, the better it is. By this meane you shall haue a very good claye, foꝝ to lute oꝝ clay, and ioyne violles, flagons of glasse to still with, and bottels of gourdres foꝝ stilling, and other great thinges, as founnelles and such like. But he that wil make it with moꝝe ease, let him put the earth onely, the flore, and the boꝝse dong, with a fewe ashes. Some put no boꝝse dong to it, and some no flore, according to the purpose that they make it foꝝ. Foꝝ to stop and close vp the mouthes of stilling glasses, oꝝ violles, to the intent they take no vent on the fire, the sayde clay will be very good; neuerthelesse men put to it two partes of quicke lime, and the whites of Egges, and then it will be surer to let nothing vent oute but the glasse it selfe. All kinde of clay oꝝ earth woulde be kept moiste, and reedy dressed foꝝ him that will occupye it continually, but it must not be kept to watery, noꝝ yet left to drie, foꝝ then it woulde serue foꝝ nothing, seeing that after it is once hardened, a man can not dresse it any moꝝe to do any good withall. And when you put water to it, it is mollified by litle & litle aboue, and is as it were a sauce, but within remayneth harde, and if you put to muche water to it, you marre it vtterlye. Therfoꝝe, when you see that it beginneth to ware drie, see it a new litle and litle with water, styng it till it be well, and so shall you make it perfecte.

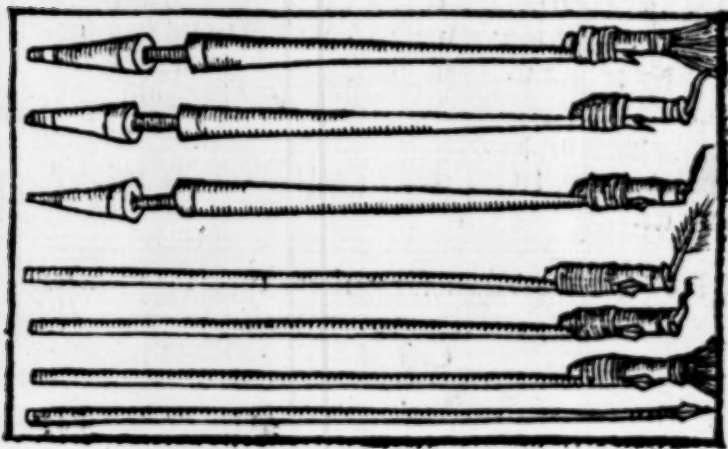
¶ How to make certayn fireworke to tye at the pointes of pikes or horsemen staues.

Cap. xl.

## of fireworkes.



Or to assaulte or to defende a bzeache, and also to worke some policie in the night against the enemies, it is sometimes good to tye at the pointes of pikes or launces, certayne canes like unto squibbes made of paper vpon a foyme of wood as long as the bzeadeth of a shoete of paper, filled full of serpentine powder, and mingel the whiche muste be mingled litle pæces or crummes of pitche, of bymstone, graynes of baye salt, filinges of yron, and beaten glasse, arsinic, cristall beaten to pæces, and suche like, and after they are closed vp, and tied faste at one of the endes, this composition muste be well beaten into them, with there owne formes or mouldes: vnto euery one of which there must be put a good matche sod in Saltepeter and Gunneponder, and then well dyed, and fastening them to staves, after such sorte that the issue of the fire be tourned towarde the aduersaries, when you thinke good, you or some other may fire them: wher you shall then see the fire blow out two yardes long, which in the night will seme terrible: but in a calme wetther, or at least when the winde is in the faces of the enemies they are best to be vsed. And mozeouer for the fighte on the sea, they are mosse excellent.





¶ Howe to make diuers compositions of fireworkes.

Cap. xli.



Very thing that will quickly burne, and that by some proper vertue is apte to multiplie fire, and maintaine it, may be put in fyre compositions: for y<sup>e</sup> in effecte of such thinges they are made: of whiche thinges there are some that are minerall, as Brimstone, and the oyle therof, and salte

peter, & some other substances, hot, drye, & thin, & some vndius, as grease, and all sortes of oyles: some very dry, as pitch or wood: and of these there be some natural, and some artificiall: But now leauing to seeke such difference of theyr compositions, among as many thinges as well old as new y<sup>e</sup> I know, I haue found only these: out of whiche I haue chosen some of the notablest, specially these, that for to make them, there muste be take Rosen, Alchitrean, quicke Brimstone, tartar, sarcocolla, Saltepeter, and oyle of stones, and of euery one some parte, but double so much of vnslaked lime, & al must be compounded with the oyle of egges: and put into a vessel of glasse or of earth that is leaded, & covered very wel: putting it after vnder hot dung for a moneth: the taking it from thens and setting it ouer a softe fire, the vessell being well stopped, it muste be melted: which done, the lico<sup>r</sup> thereof may be put into hollowe staues, or in y<sup>e</sup> earthen bottells, or other vessels made of purpose: vnto euery one of which, must be put a peece of a gunpowdered matche, in the middelt with some gunpowder also, to the intent that they maye the easelier fire.

Also there may be made an other sorte of firework after this maner: taking Brimstone, or oyle of Brim-

Stone,

Stone,

## of fireworkes.

stone yf it maye be had, oyle of stones, or of the same  
stone Oyle of Juniper. Saltepeter very well refined:  
and for euery porcion of suche thinges, five of asfaltto:  
and moreouer gorsegrease, pure pitche, bernis, powder  
of pigeons dunge, and so muche aqua vitæ, that maye  
thoroughly moyste all the foresayde thinges: which then  
muste be putte into a vessell of glasse, and the mowthe  
thereof well stopped with ware, and then put vnder a  
hot dunghill. .rrv. or .rrr. dayes: and after to make  
it the better incorporate, it wolde be set ouer a softe  
fire: and that done, this composition maye be put into  
hollowe stanes, or yearthren pottes or like vessells to  
be thzowen with the hande: also there maye be taken  
a bullet of stone with a ring fastened therein, where-  
vnto wolde be tied a corde of a yarde long: and aboute  
the same stone, putting Toe imbzwed with the fore-  
sayde composition, or els pæses of linnen clothe all to  
rayed therewith, whiche tiring, when it is well kende-  
led, maye then be thzowen. Also balles of this compo-  
sition maye be shotte in pæses of ordinaunce, or a stone  
that hath a ring of yron fastened in it, to the which ring  
may be tied a pæce of a rope streped and sod in the fore-  
sayde composition, or els a littell bagge full thereof,  
which maye be shotte or thzowen as one liste. Moreo-  
uer balles of this, being made with linnen clothe as a-  
foze is shewd, may be caste with all sortes of slinges  
whiche way one will.

Also there is made an other composition in this  
maner, with vernice liquide, oyle of quicke Wrim-  
stone, and oyle of the pelkes of egges, turpentine oyle, ju-  
niper oyle, linsæde oyle, and olium saxum, or oyle of  
stones, and haulte as muche of aqua vitæ as all the saide  
compositions: and also as muche powder of bayes fine-  
lie beaten as will suffice to thicken all, with as muche  
more Saltepeter: and all these thinges muste be put to-  
gether in a vessell of glasse, or some vessell of yearth lea-  
red

bed with a littell mouthe, which with ware muste be so stopped that it venter not: and this must be kepte after thre monethes in hotte dung to putrisie, remouing it euery moneth fowre or fve times, and shaking it together euery time: and this matter being broughte in such wise, when you will occupie it, it is requisite that you anoint the same thing that you will vse, or to put thereof into that vessel, where you will haue the fire to worke: so that the same fire is suche, that putting thereto some gunnepowder, or a gunnepowdered matche, it wil straight waye kendell: and it is so vnquencheable, that it burneth till be, or the thing that it lighteth on, be altogether consumed: and if this composition fired, chauce to be throwen and lighte vpon armur, it will make it so glowing redde in suche sorte, that he that hath it on his backe, shalbe constrained to put it of, if he will not be burnt to death.

Also there is made an other sorte: and it is a mosse thinne liquore apte to fire, with the whiche if in the canicular daies a peece of wodde, or other thing apte to burne be anointed, the heate of the Sunne is then able to set it on fire, and to burne it: and so sone as it is touched with fire, it kendealeth incontinente, and is vnquencheable: excepte it be choked vp with sande, or wet with very stale vyin, or mosse strong vineger: also it will burne in the water: the making, whereof is in this wise: there muste be taken Camphire, oyle of quicke Brimstone, oyle of turpentine, oyle of dunge, oyle of iuniper, oyle of stoness, oyle of linte seede, alchitrean, colofonia, mosse finely beaten, oyle of egges, pitche, gosse grease, Saltpeter, and as much aqua vitæ as all the rest of the composition, and as much arsenic, tartar, and armoniack salte, as the eghte parte of altogether.

Which thing muste be put into a glasse or pot wel stopped, and then set to putrefie in a hotte dungbill for the space of two monethes: and after al the foresayd thinges must

## Of fireworkes.

muske be distilled with a gentle fire: where within viij. hentes, there will come of those things a moste suddill liquoz, into the whiche putting then so muche ordung dyed in an ouen and moste finely beaten to poudre, as maye make it so thicke as sope or scintillat thinner: and after minding to occupye it, the thing that is to be burnt, muske be annointed therewith: and this also the Sunne will set on fyre, and burne what so euer is near it.

Also there is an other composition of fyre, that anye thing that is annointed therewith, will maruaylously burne and fire with wetting of raine, or otherwise: whiche to make, there must be taken new whitelime made of flinte, calanyte made to poudre by fyre, vitrioll grosse beaten the fowre and thirtieth parte, Saltpeter refined eyght partes: and as muche Camphere as all the fowresayde thinges: oyle of quicke bzimstone: oyle of turpentine, Salte armoniacke, by waighte as muche as the vitrioll, and as muche tartar and baye Salte: Salte of pyrin, Aqua vitae made of strong wine as much as all the rest of the composition: the which things compounded together, muske be put like as the other were, into a great glasse well stopped that it breathe not out: and then it muske be set in a whote dounghill for two or thre monethes, removing the glasse and chaunging the dounge at leaste euery tenn dayes, to the intent that the same matter maye ripen well, and be like vnto a liquoz all of one thing: the whiche after oughte to be boyled so muche vpon a softe fire, that all the oyle humiditie, and other moistenesse that is in it, maye vapour awaye, and the rest to become drie and stony: and when it is drie and stony, breaking the glasse & taking it out, it must be grounde to poudre: the whiche when it is to be occupied, must be strawed vpon the place that is dressed for the same purpose, so yf it being rayned vpon or any maner of waies wet, will kinde & fall on a fire.

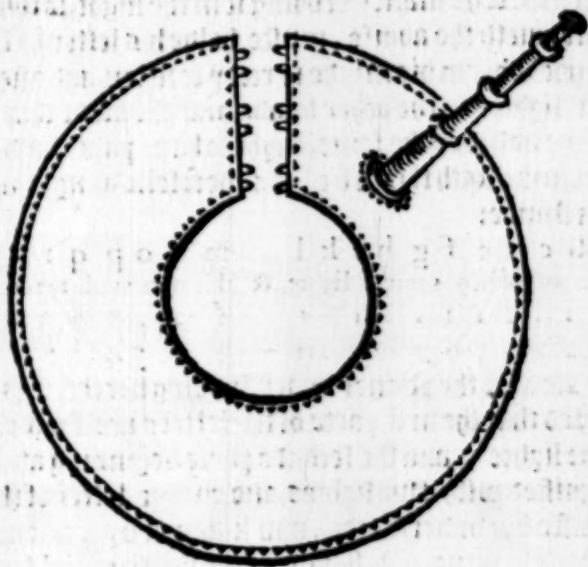
Howe



¶ How to make a girdle for Souldiours or Fishers wher-  
by they may go in the water and passe ouer a riuier  
without either bridge or bote.

Cap. xlii.

**T**his Girdle oughte to be made according to the  
fashion of the figure next following, and of such  
lether that muste be dyed in like sorte, as the  
same is where with scotebals are made: wher-  
vnto a pipe muste be fastened like vnto a baggepipe, so  
that the girdle, when it is girt about a Souldiour vpon  
his armour, maye be blowen full of winde: by helpe  
whereof, he maye then safelye passe ouer a riuier, going  
throughe the same, howe deepe so euer it be, where he  
shal not synke in the water, further then from the girdle  
steepe downe warde: whiche for men of warre, is verie  
commodious and a most necessarie thing.



Howe

## Offending aduise.

¶ How to write, and cause the same that is written to be read a farre of without sending anye message. Cap. xli.



¶ Hen a Capitain were so besieged of enemies in a towne or fortresse that no man coulde come vnto him, or be sent fro him with letters, wherby his minde, or the distresse and inconuenience that hee is in, might of his friends be vnderstande. Yet his minde being witten, maye of the notwithstanding in the night be read, as farre of as a lighte can then be seene, and by daye, as farre as a burning glas can caste the sunne, or a hat or any other such like marke maye perfectlye be decerned, so that the order therin be firste knowen and agreed vpon betwixen both parties. The maner in doing it in the night, is thus: hee that giueth the aduise, muste holde his letter in the one hande wherin his minde is ready witten, and one lighte or y. lightes in the other hande, and the other that should reade and cōpy the same, ought to haue paper, and penne and inke with this a b c, et c. herefollowing, and vnderstande:

a	b	c	d	e	f	g	h	i	k	l	m	n	o	p	q	r	s	t	v	w
this part of letters vvith .i. lighte, &											this part vvith tvoo lightes.									
1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2
1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	9	10

And so the plainer vnderstanding hereof, it is to be noted that the first parte of the letters are shewed with one lighte, and the seconde parte beginning at, M, are signified with two lightes, and euery letter of the a b c muste be vnderstande, and knowen by the number or often shewing and hiding of the lighte or lightes: As for example, if this woorde, Man, were to be witten, because

## *Offending aduise*

because M is the first letter standing in the second part, M muste be signified by two lightes shewed once, and then hidde, and staied so long as maye be thoughte that he that dooth coppe after the lighte so severallye shewed, and the number diligently marked, maye haue conuenient time to write M : then one lighte being shewed once, and so hidde and staide, a muste be written: for that a is the first letter in the first parte: and againe two lightes being shewed twice and stayde, n, oughte to be written, because n is the second letter in the second part: whiche done, there shalbe written Man. And thus by marking well the number of shewing, hyding and stayeing of the lighte or lightes, the letter that thereby is signified, maye moste easely be vnderstand and perceyued. So that after this sorte, there maye be exprested and written what so euer a man like.

## To the Reader.



When the Britons the auncient inhabitauntes of this Iſle ( for lacke of ſkillfull men of vvarre of their ovvne , being aſraied of the Franki, & Burgundi, vvhicke vvvere certaine Barberous natiōs, vvho at the time ouer ran, ſpoiled, & poſſeſſed Frāce ) cauſed the Germaine people called Angly to come to ayde and defende them, by vvhoſe procurement the Angly vnder Vortiger their King, taking vpō the the ſame enterpriſe,

after they had ones defended them, did then incontinente driue them out of this Iſlande, remaining here them ſelues to inhabite : and after their name called it England: euē as alſo of later daies, the like chaūce happened to the Greekes, by calling in the Turckes to helpe them againſt their enemies. VVhich exāples, vvith innumerable like being vvell conſidered, do moſt manifeſtly ſhevv, hovv daungerous & pernitiuſ it is for a Prince and his Realme, to be driuen to truſte to the ſeruiſe of ſtraungers, for lacke of ſufficient ſkillfull men of their ovvn for their defence. VVherfore ſithens my intent in ſetting fourth this booke of Martiall affaires, hath beene onely to the ende to declare my good vvill, to haue my naturall cōntriemen not to bee inferiour to anye in vvvarlike knowlledge, but rather to excell in the ſame, vvherby vvithout aide or helpe of any forein nation, vvee may alvvayes bee moſt renouvmmed and famous, I ſhall beſeeche all gentill readers , for this my labour done for their cōmodities, to iudge and reporte thereof accordingly. And although my doinges herin, be not correſpondēt to my deſire, nor to the ſatiſfactiō of euery māns minde (vvhich vvvere impoſſible) yet my truſt is, that ſome neuertheleſſe by diligēte reading therof, and imitating the example of Lucullus, (vvho chieflye by ſtudie of like bookes , in very ſhorte ſpace, became one of the valianteſt and vvorthieſt vvaiour of all the Romanes, ) may if they liſt, take commoditie and profite , vvhereby the knowlledge in vvwarres, may of ſuch as neuer haue bene trayned in them, be the more eaſily gotten and attained. For vvhich cauſe, my indeuour and trauayle taken herein, for to profit this our common vveale , deſerueth not vterly to be deſpiſed, ſeeing that the moſt verteuſ life , and gouernement of Alexander Seuerus Emperour of Rome, vvith manye other Princes, and common vveales, could not, being negligēt in this kinde  
of



of studie and practis therof, saue or defende them selues, from moſte  
ſhamefull endes, & miſerable deathes: vvherin fortune vv as not to be  
blamed, but only their folly & ignoraunce, for hauing neuer thought  
in time of tranquillitie and peafe, that it could change into aduerſi-  
tie and trouble: the vv which is a common faulte of men, not to  
make accompte in ſayre vveather, of the  
tempeſt to come.

## ¶ The table of the additions.



Perfete rule to bying men into a square battell, of what number so euer they be. fol. ij.

To knowe howe many men may march in a ranche, & at a suddaine to bying the into a fower square battayle, so y their

Ansigne, maye come to be in the midst. iij.

Howe to ordayne a number of men or an armie into a battayle, like vnto a wedge, or thre square, so that it maye be apt to marche with the poinde therof toward the enemies. vi.

To make the battayle called the spheres, whiche in olde time they vsed to set against the Triangle. vii.

What auantage it is to order mē in a triangle battayle against the enemye, that knoweth not howe to make the battayle called the spheres to set againste it, especially where there is as many men of the one parts as of the other. viii.

To bying a number of men or an army. into a battayle, whiche in olde time was called a Sawe. ix.

To fashion a battayle of a number of men or an armye like vnto two Triangles ioyned together, so that they may be apte to march with a corner thereof toward the enemies. x.

What is best to be done where the ordinaunce of the enemies being shot into the Armye hath slayne many men. xi.

Howe to chaunge with spide an armye, that is, in battellray four square, into a Triangle fashion, without disordering the first ranches, and without perill of confusion. xii.

Of the perfete forme or fashion of strong places. xvi.

The strongest and perfectes fashion of all other for the building of y cortin or wall of a town or fortresse. xviii.

An example of the quadzante forme to proue that it causeth

## *The Table of the additions.*

causeth debilitie and weakenesse.	xxii.
Of the nature of Saltpeter, and the manner howe to make and refine it.	xxiiij.
The manner howe to make all sortes of Gunpowder.	xxv.
fol.	xxviij.
The manner that is vsed of charging and shooting of ordinaunce.	xxviii.
Howe to gette onte quickly the nailes that should happen by Treason, or otherwyse to be dizen into the touchholes of ordinaunce.	xxxiij.
Howe much the artillery ought to be esteemed of the armies now adaiies, and whether the same opinion of them which is had vniuersally, be true.	xxxiij.
Of Mines and placing of Powder undergrounde, wherewith the inuisible Fortresses, by fire maye be ruinated, when ordinaunce cannot be brought vnto them.	xxxiij.
The manner howe to make trombes or frunches of fire, as well to assaulte as to defende a beache, or gate, and to sette a fire a Towne or Campe, or any thing elles.	xxxix.
Howe to make bottells or pottes of fireworke to throw into shippes, or among menne that are in battellraye.	xl.
An other composition of fireworke.	xl.
Balles of mettell to throwe among men in battellraye or otherwise, whiche breaking, shal do wonderful hurte.	xli.
The manner howe to prepare pottes and balles of fire worke to throwe with hande.	xli.
How to make balles of wilde fire, to shote in ordinaunce or to throwe with handes.	xlii.
To trimme Targettes with fireworke to assaulte, or to defende a beache.	xliij.
To make an other kinde of fireworke.	xliij.
	Howe

## *The Table of the additions.*

**H**owe to make a mixture in stone that shall kende fire  
with water or spittell. rlty.

**T**o make an other kinde of stone, to kende fire with  
water or spittell. rlty.

**H**owe to make lutum Sapientia. rlty.

**H**owe to make certayne fireworke, to tye at the poyntes  
of Wykes or Horsemenstaues. rlv.

**H**owe to make diuers compositions of fireworkes:

**H**owe to make a girdell for Souldiours or Fishers,  
whereby they may go in the water and passe ouer a  
riuer withoute eyther brydge or boate, rlviij.

**H**owe to wyte, and cause the same that is wytten to  
be redde a farre of, withoute sending anye mes-  
sage. Fol. rlvij.

*The ende.*



¶ *Imprinted at London, by*  
*W. W. Williamson: for*  
*Ihon Wight.*

¶ Anno salutis. M. D. LXXIII.  
Mense. Septembris.



¶ *Most*  
**BRIEFE TA-**  
ble to know verily howve  
*manye ranckes of footemen armed*  
*with Cogletes, as vnarmed, go to the ma-*  
king of a iust battayle, from an hundred vnto  
twentye thousande.

**NEXT A VERY EASIE, AND AP-**  
proued vway to arme a battaile vvith Harkabuzers,  
**and winges of horsemen according to**  
the vse at these daies

**NEVVLYE INCREASED, AND LARGELYE**  
*amplified both in the tables, as in the declarations of*  
*the same, by the Authour him selfe.*

**GIROLAMO CATANEO NOVARESE.**

**Tourned out of Italian into English by. D. G.**



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¶ *Imprinted at London, by*  
**VV. VWilliamson :** for  
Iohn VVight.

---

*Anno. M. D. LXXIIII.*

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To the righte honorable, his  
singuler good Lord the Erle  
*Aloigi Auogardo.*



**I**S THE COMMON opinion of all worthye men, that among things that preserue a man still in life, vvarfare is that one, before the vvhich none other is to haue place. And that because whosoever behaueth him self honorably in the exercise thereof, representeth nothing more, then the true Image of the moste great and omnipotent Gods. Because, among the most high titles attributed (according to his will) to his deuine Maiestie in the olde and holy lawe, he hath alvvayes bene content to bee reuerenced and called by the name of the God of hostes. VVherupon it is come to passe, that for a good and deuine example for vs, there hath hetherto beene alwaies graunted and offered by the vvhole world vnto this most noble vvarfare, profession, great revwards, high honours, and innumerable praises: VVherof, such store of testimonies, are to be seene in your moste honorable and auncient house, as it is superfluous (mee thinketh) to tell, howe Emperours, and great kinges haue revwarded the vvorthinesse and loyaltie therof vvith no meane degree and Signorye. The vvwhich vvorthinesse and loyaltie, shyning as it were through a certaine proprietie of long space in your Father, and graundefathers: as the same hath at other times been by prooffe well knowen, and honorably rewarded, by that most prudent Senate of *Veni e*, so are they novve by worthy succession and common consent

## *The Epistle.*

in suche sorte dailye approued, and praised in you, as among the faithfull and deare friendes thereof you are reputed and kept, for agreate capitaine, a louing child, brother, and champion. VVhich is the cause that I (studying to profite with these my trauailes, such as they are, each one that is delighted with this most noble kinde of exercise) coulde not deuise a person in this citie, to whome (for his rare vertue, and my bounden dutie) I might better dedicate and consecrate them, then to your Lordship. And thus I shall arme them, with a iust defence against those that are of a malicious minde, and like a good seruauant of yours, that in reuerensing and folowing you, giueth place to none, do praye you the rather to take this patronship vppon you, as in deedes of humanitie and noblenesse of minde, I know neuer a Lord at this day, that may take this prise from you. To whose good

fauoure I doo moste reuerently

recommende me: From

Brescia the .5. daye

of Iulye.

1563.

¶ *Your Lordshippes most*

*humble seruant, Girolamo, Casanto*  
*Nouaresc.*

## *A Declaracion of the Columnes*

of the tables following.

**T**he firste numbers, placed in the first Columnne, do signifie the footemen, armed with Coznettes, as vnarmed, or vnarmed Pikes.

The seconde numbers, in the seconde Columnne, do signifie so manye footemen in a rancke, as is required that the footemen of the first Columnne do go in araye.

The thirde numbers in the thirde Columnne, do signifie so manye ranckes, as the footemen of the first Columnne do go in araye.

The fourth number in the fourth Columnne, do signifie, the footemen that do excede, the araye being made.

The fiftie numbers in the fiftie Columnne, do signifie so manye maniples or partes, the raye is to be made into, so that doubling the, shoulde to shoulde, it maye make a square battaile of number of people.

The sixte numbers, in the first Columnne, do signifie so many footemen in a rancke, as shalbe set to the shoulde of the maniples, and these rancks are made of those ranckes that did excede in the last of the raye, because they are not one entier maniple, and this is done so; to performe an entier battaile of number of people.

The seuenth numbers, in the seuenth Columnne, do signifie the number of people in length, and breadth of a battaile, that is, the first number doth signifie the people in length, and the seconde the people in breadth of that battaile.

The eight numbers, in the eight Columnne do signifie the footemen that do excede, out of a square battaile of number of people.

The ninth numbers, in the ninth Columnne, do signifie so manye maniples, or partes, as the araye of the footemen, of the first Columnne is to be made into, so that doubling the one maniple to the other, from shoulde to shoulde, they do make a square battaile of ground.

The tenth numbers, in the tenth Columnne, do signifie

so

## *Declara. of the Columnes.*

so many footemen in a ranke, as is to be set to the shoulder of the maniples, and these ranks are made of those ranks that do excede in the last of the raze, because those ranks do not make an entier maniple, so to be able to perfoyme a square battaile of ground: so these ranks that are to be set to the shoulder of the maniples, are made of fewer men in a ranke, to the ende they may make the length equal to that of the maniples, so to be able to perfoyme the same battaile square of ground. And this battaile commeth to be two times and a thirde more brode then long, as experte warriors, both auncient & moderne will haue it. And this maner of battaile is square of ground, that is, as long as brode.

The eleuenth numbers in the eleuenth Columnne, do signifie, so many men in length and breadth as are in a square battaile of ground, that is to say, the first number is the length, and the seconde the breadth.

The twelfe numbers, in the twelfth Columnne, do signifie the exesse of the footemen, of a square battaile of ground.

The thirteenth numbers, in the thirteenth Columnne, do signifie so many maniples or parts as the aray ought to be made into, so to make a twofolde battaile.

The fourteenth numbers, in the fourteenth Columnne do signifie so many footemen in a ranke, as is to be set to the shoulder of the maniples, and these ranks are made of those ranks, that do excede in the last of the raze, because they do not make one entier maniple, to the length of the others. And these ranks that are made, of fewer men in a ranke, to the ende they may be equal in length to the maniples, to be able to ioyne shoulder with those maniples, to perfoyme a twofolde battaile, that is, that the breadth be of two times so many men as the length.

The fiftenthe numbers in the fiftenthe Columnne, do signifie the lengthe and breadth of a square twofolde battaile,



## *Declara. of the Columnes.*

battaile, the firste, number are the length, and the second the bzeadth.

The sixteenth number in the sixteenth Columnne, doo signifie so many footemen as doo cræde in a square tix fold battaile

We haue already spoken of a square battaile, of nûber of people, of ground, & tix fold. next, it shalbe vzielfe declared, although in the beginning of this treatise, there is inough sayd. A square battaile of number of people, is when there are so many men in length, as in bzeadth, & this battaile, the authoꝝ vnderstandeth, not to be square of ground, accozding to the distance that men will haue in length and bzeadth, in theyꝝ march and fight, abiding still in battaile, because being square in nûber of people, and those footemen hauing theyꝝ due distance, and seuen fote in length, and thæ in bzeadth, as is aboue sayd, the battaile would bæ tix times, and a thyꝝde, moze long then bzoade of ground. So as this number of battaile cannot be called a square battaile of ground. Because a battaile square of ground, is tix times & a thirde moze bzoade then long of men: & this maner of battail, hauing the due distace as is aboue sayd, may be very wel called a square battaile of ground, because this battaile doth take as much ground in length as in bzeadth. And a square tix fold battaile, is tix times moze bzoade, then long, foꝝ taking a way of the armed rankes frõ the head & taile therof, to arme the tix flanks of þ battaile, it wilbe stil the selfe same in length & bzeadth of mē, as is the square battaile of ground, & foꝝ this cause it maye also be called a square battaile of ground. And foꝝ þ this sozt of battaile is moze in vse then þ others, by reason of the vnarmed pikes, I haue therof set foꝝ thæ many crâples, as in this woꝝke is to be sene. And if it sême god vnto you, to make your battailes of any other propozcion, you shall find the whole in the end of this woꝝke: With other god aduertizementes how to incampe.



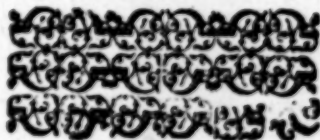
¶ Girolamo Cataneo,  
to the gentle Reader.



STO KNOWE, HOWVE  
to determine vppon a sodayne,  
fitteth vuell to enerye one that  
hath anye doinges, and that in  
the handeling therof, hath ther-  
by gotten great honnour and  
commoditie: So is it (according  
to the iudgement of the vwise) of  
greatest importance to an host,  
that is in the feeld out of array.

Because is often happeneth, that hauing neede sometimes to  
fight vpon small vvarming, it is vvith a lesse number of people  
assaulted, put out of order and ouerthrowen. VVherfore  
I haue taken vpon mee, being desirous to helpe at so great a  
need, to shew briefly the vvaye howve it maye quicklye bee  
brought into a maine battaile, and howv readely to arme the  
saide battaile asvvell vvith Corslettes, as barkabuzers, and  
horsemen. To the ende that enery meane vvise, may under-  
stande all that, vvich 7, by the space of thirtie yeeres and  
more, haue obserued from vvise Capitaines, proued by expe-  
rience in person, and learned asvvell by the vvarres, as by the  
Mathematicall disciplines: VVherbyeche one may knowve  
howv at neede, valiantly to resist the vnset of the enemye,  
and that for the most times, not so  
much by force, as by  
pollicie.

A. iij.







## ¶ *A declaracion of the squares* of a Battayle.



Ecause it were to long a worke,  
foz those that are ignozaunte  
howe to make the reconing  
to sett a battaile, of men ar-  
med with Cozsettes, as vn-  
armed, according to the cus-  
tom obserued at these daies,  
I haue founde out certayne  
bziefe and easie Tables fol-  
lowing: Whereby maye eu-  
dently be seene (the whole number of the armed and vn-  
armed, being once knowen) howe long and broade it  
ought to be, beginning from an hundred vnto twentye  
thousand. Foz it is almost an impossible thing, though a  
battaile were verie greate, that it shoulde mount vnto  
this number, foz that at these dayes the manner is not,  
to set a battaile of moze than of tenne or twelste thou-  
sande men. And ye shall vnderstand further, how it is  
needefull that a battaile well appointed, bothe foz the  
fight and marche, that it be square of grounde and not of  
people: Or else two folde in respect of the ranches, that  
are taken from the head and taile of the battaile, to arme  
the two flankes, as by our example shalbe declared.  
When the grounde that this battaile doeth occuppe is  
square, it commeth to passe that there are not so manye  
men in lengthe, as are in bredthe. Of a square battaile,  
or number of people, and not of grounde, as is seene in  
the fiste, sixte, and seuenth Colunne of our tables: and  
of this battaile, it is necessary to speake a few woordes:  
To wit this battaile is square of number of people, and  
not of grounde, that is, there are so many men in length,  
as in bredth. But though the dissaunce which is  
needefull to be had, betwene sctemen and sctemen,  
from best to back, set foz the marche and foz the fight,  
it commeth to be moze long then brode of ground. Or  
else

## Of the square battailes.

else it is square of number of people, and consequente of ground. As when there are so many men in length, as are in breadth. True it is, that this kinde of order is not mete to fight, because such a square cannot be found, but that for the most times, all the pikes be at stand, and  
**Marbrato.** byright. Letting you to wit, that it mighte for all that come to passe, that the pikes shoulde fall from theyr  
**Disaborare.** stande, and the battaile remaine in lyke sorte square of ground, as of people. At what time it should happen for a very strange thyng, that the battaile, whilest it were  
**straagante.** with the pikes at stande, should be assailed on al four partes, and being willing to bende theyr pikes for their defence, in that case, some fewe of them abiding fast in the Center of the battaile, and all the others rounde about being enlarged proportionally, the battaile shoulde yet remayn square of people & of ground excepte the angles, which should come to be opened. And this is the reason that the pikes, which are at stand, are not mete to fight, because in so being, each fote man hath not .7. fote space in lengthe, that is, thre before, and thre behinde, & one for his person, the which space is needefull to be appointed out, to each foteman in the abovesayde battailes. Besides that, it is also to be knowne, how according to the good deuision, that our auncients do make, which is both praised & obserued, by the wise captains of this our time, it is needefull for the hauing of the aboue sayd squares of a battaile, that euery foteman haue in breadth, fro shoulder to shoulder, thre fote in this sort, to wit, that there be two fote betwene one foteman & an other, so that euery one doth occupy one fote for his person, & one other the he is to haue on each side him, which is 3. in breadth for each one of the. And although a bataile in fight both were more narrow, as wel in length as in breadth, the one setting his fote in the midde pale of the other, It yet remaineth not for all this, but that the aboue sayde battaile is also square of ground.

100	3	33	1	3	1	10		5	1	6		4	2	7	
	5	20	0	2	0		0	3	1			2	4		2
	7	14	2	1	3	10		2	2		4	2	0		
	9	11	1	1	1			1	7	16		1	5	14	
150	3	50	0	4	0	12		6	0	8		6	0	8	
	5	30	0	2	2		6	3	3		6	3	3		6
	7	21	3	1	5	12		2	4			2	4		
	9	16	6	1	3			2	0	18		2	0	18	
200	3	66	2	4	2	14		7	1	9		6	2	10	
	5	40	0	2	4		4	4	2			4	0		0
	7	28	4	2	0	14		3	1		2	2	6		
	9	22	2	1	5			2	4	22		2	2	20	
250	3	83	1	5	1	15		8	1			7	1	11	
	5	50	0	3	1		10	5	0	10		4	2		8
	7	35	5	2	2	16		3	4		0	3	1		
	9	27	7	1	7			2	7	25		2	4	22	
300	3	100	0	5	2	17		9	0			8	1		
	5	60	0	3	2		11	9	2	11		5	0		0
	7	42	6	2	3	17		3	6		3	3	4	25	
	9	33	3	1	8			3	0	27		2	7		
350	3	116	2	6	1	18		9	2			8	2	13	
	5	70	0	3	4		8	5	4	12		5	1		12
	7	50	0	2	5	19		4	1		2	3	5	26	
	9	38	8	2	1			3	2	29		2	8		
400	3	133	1	6	2	20		10	0	13		9	1	14	
	5	80	0	4	0		0	6	0		10	6	13		8
	7	57	1	2	6	20		4	2			4	0	28	
	9	44	4	2	2			3	3	30		3	1		
450	3	150	0	7	0	21		10	2	14		10	0	15	
	5	90	0	4	1		9	5	1			6	0		0
	7	64	2	3	9			4	4		2	4	2		
	9	50	0	2	3	21		5	5	32		3	3	30	

I II III IIII V VI VII VIII IX X XI XII XIII XIII XV XVI

500	3	166	2	7	1	22		11	2	14		10	1	16	
	5	100	0	4	2		16	7	0		10	6	1		4
	7	71	3	3	1	22		5	0			4	3		
	9	55	5	2	4			3	8	35		3	4	31	
550	3	183	1	7	2	23		12	0	15		11	1	16	
	5	110	0	4	3		21	7	1		10	6	4		6
	7	78	4	3	2	23		5	1			4	6		
	9	61	1	2	5			4	0	36		3	7	34	
600	3	200	0	8	1	24		12	1	16		11	2		
	5	120	0	5	0		0	7	2		8	7	0	17	
	7	85	5	3	4	25		5	2			5	0		5
	9	66	6	2	7			4	1	37		3	8	35	
650	3	216	2	8	2	25		12	2	17		12	0	18	
	5	130	0	5	1		0	7	3		4	7	1		2
	7	92	6	3	5	26		5	3			5	1		
	9	72	2	2	8			4	2	38		4	0	36	
700	3	233	1	8	2	26		13	2	17		12	2	18	
	5	140	0	5	1		24	8	1		3	7	3		16
	7	100	0	3	5	26		5	6			5	3	38	
	9	77	7	2	8			4	5	41		4	2		
750	3	250	0	9	0	27		13	2	18		13	0	19	
	5	150	0	5	2		21	8	1		12	7	4		9
	7	107	1	3	6	27		5	6			5	4		
	9	83	3	3	0			4	5	41		4	3	39	
800	3	266	2	9	1	28		14	2	18		13	1	20	
	5	160	0	5	3		16	8	4		8	8	0		0
	7	114	2	4	0	28		6	2	44		5	5	40	
	9	88	8	3	1			4	8			4	4		
850	3	283	1	9	2	29		14	2	19		14	0	20	
	5	170	0	5	4		9	8	4		14	8	2		10
	7	121	3	4	1	29		6	2			6	0		
	9	94	4	3	2			4	6	44		4	6	42	



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900	3	300	0	10	0	30		15	0	20		14	0	21	
	5	180	0	6	0		0	9	0		0	8	2		81
	7	128	4	4	2	30		6	3			6	0		
	9	100	0	3	3			5	0	45		4	6	42	
950	3	316	2	10	1	30		15	2	20		14	1	22	
	5	190	0	6	1		20	9	2		10	8	3		4
	7	135	5	4	3	31		6	5			6	1	43	
	9	105	5	3	4			5	2	47		4	7		
1000	3	333	1	10	2	31		16	2	20		15	0	22	
	5	200	0	6	2		8	10	0		0	9	0		10
	7	142	6	4	4	32		7	1	50		6	3	45	
	9	111	1	3	5			5	5			5	0		
1100	3	366	2	11	0	33		16	2			15	2	23	
	5	220	0	6	3		11	10	0	22		9	2		19
	7	157	1	4	5	33		7	1		0	6	5		
	9	122	2	3	6			5	5	50		5	2	47	
1200	5	240	0	7	0	34		10	2			9	3	25	
	7	171	3	5	0		10	17	3	23		6	6		0
	9	133	3	3	8	35		5	7	52	4	5	3	48	
	11	108	4	3	2			4	8			4	4		
1300	5	260	0	3	1	36		11	1	23		10	0	26	
	7	185	5	5	1		4	8	0		12	7	1		0
	9	144	4	4	0	36		6	2	56		5	5	50	
	11	118	2	3	3			5	1			4	6		
1400	5	280	0	7	2	37		11	3	24		10	3	26	
	7	200	0	5	2		31	8	2		8	7	4		22
	9	155	5	4	1	37		6	4	58		5	8	53	
	11	127	3	3	4			5	3			4	9		
1500	5	300	0	7	4	38		12	0	25		11	0	27	
	7	211	3	5	4		18	8	4		0	7	6		15
	9	166	6	4	3			6	6	60		6	1	55	
	11	136	4	3	6	39		5	5			5	0		

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1600	5	320	0	8	0	40	0	12	1	26	14	11	2	28	4
	7	228	4	7	5			8	5			8	1		
	9	177	7	4	4	40		6	7	61		6	3	57	
	11	145	5	3	7			5	6			5	2		
1700	5	340	0	8	1	41	19	12	2	27	26	11	3	29	18
	7	242	6	5	6			8	6			8	2		
	9	183	3	4	5	41		5	8	62		6	4	58	
	11	154	6	3	8			7	7			5	3		
1800	5	360	0	8	2	42	36	12	4	28	8	12	0	30	0
	7	277	1	6	0			9	1			8	4		
	9	200	0	4	6	42		7	1	64		6	6	60	
	11	163	7	3	9			5	9			5	5		
1900	5	380	0	8	4	43	8	13	2	28	24	12	1	31	9
	7	271	3	6	2			9	4			8	5		
	9	211	1	4	8	44		7	4	67		6	3	61	
	11	172	8	4	0			6	1			5	6		
2000	5	400	0	9	0	44	20	13	3	29	28	12	4	31	16
	7	285	5	6	3			9	5			9	1		
	9	232	2	5	0	45		7	5	68		7	1	64	
	11	181	9	4	1			6	2			5	9		
2100	5	420	0	9	1	45	30	14	0	30	0	13	0	32	10
	7	300	0	6	4			10	0			9	2		
	9	233	3	5	1	46		7	7	70		7	2	65	
	11	190	10	4	2			6	4			5	10		
2200	5	440	0	9	2	46	38	14	3	30	10	13	1	33	22
	7	314	2	6	5			10	3			9	3		
	9	244	4	5	2	47		8	1	73		7	3	66	
	11	200	0	4	3			6	7			6	0		
2300	5	460	0	9	3	47	44	14	4	31	6	13	2	34	22
	7	328	4	6	6			10	4			9	4		
	9	255	5	5	3	48		8	2	74		7	4	67	
	11	209	1	4	4			6	8			6	1		

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2400	5	480	2	10	0	48	0	15	0	32	0	14	0	34	20
	7	342	5	7	1			10	5			10	0		
	9	166	5	5	5	50		8	3	75		7	7	70	
	11	218	2	4	6			6	9			6	4		
2500	5	500	0	10	0	50	0	15	3	32		14	1	35	15
	7	357	1	7	1			11	1			10	1		
	9	277	7	5	5	50		8	6	78	4	7	8	71	
	11	227	3	4	6			7	1			6	5		
2600	5	520	0	10	2	50	0	15	3	33		14	2	36	8
	7	371	3	7	3			11	1			10	2		
	9	288	8	5	7	52		8	6	78	26	8	0	72	
	11	236	4	4	8			7	1			6	6		
2700	5	504	0	10	2	51	48	15	4	34		15	0	36	0
	7	385	5	7	3			11	2			10	5		
	9	300	0	5	7	52		5	7	79	14	8	3	75	
	11	245	5	4	8			7	2			6	9		
2800	5	560	0	10	3	52	44	16	0	35		15	6	37	25
	7	400	0	7	4			11	3			10	3		
	9	311	1	5	8	53		8	8	80	0	8	7	75	
	11	254	6	4	9			7	3			6	9		
2900	5	580	0	10	4	53	38	16	2	35		15	1	38	12
	7	414	2	7	5			11	5			10	0		
	9	322	2	6	0	54		9	1	82	30	8	4	76	
	11	263	7	4	10			7	5			6	0		
3000	5	600	0	11	0	54	30	16	3	36		15	7	38	156
	7	428	4	7	6			11	6			11	1		
	9	333	3	6	1	55		9	2	83	12	8	9	78	
	11	272	8	5	0			7	6			7	1		
3100	5	620	0	11	1	55	20	17	1	36		15	4	39	19
	7	442	6	8	0			12	2			11	2		
	9	344	4	6	2	56		9	5	86	4	8	7	79	
	11	281	9	5	1			7	9			2	2		

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3200	5	640	0	11	2	56		17	1			16	0		
	7	457	1	8	1		8	12	2	37		11	3	40	
	9	355	5	6	3	57		9	5		18	8	8	80	0
	11	290	10	5	2			7	9	86		7	3		
3300	5	660	0	11	2	57		17	4			16	2	40	
	7	471	3	8	1		51	12	5	37		11	5		20
	9	366	6	6	3	57		9	8		7	9	1	82	
	11	300	0	5	2			8	1	89		7	5		
3400	5	680	0	1	3	58		17	4	38		16	2	41	
	7	485	5	8	2		36	12	5		18	11	5		38
	9	377	7	6	4	58		9	8			9	1	82	
	11	309	1	5	3			8	1	89		7	5		
3500	5	700	0	11	4	59		18	2	38		16	3	42	
	7	500	0	8	3		19	13	1		4	11	6		14
	9	388	8	6	5	59		10	2	92		9	2	83	
	11	318	2	5	4			8	4			7	6		
3600	5	720	0	12	0	60		18	2	39		17	0	42	
	7	514	2	8	4		0	13	1		12	12	1		30
	9	400	0	6	6	60		10	2	92		9	4	85	
	11	327	3	5	5			8	4			7	8		
3700	5	740	0	12	1	60		18	2	40		17	1	43	
	7	528	4	8	5		40	13	1		20	12	2		2
	9	411	1	6	7	61		10	2			9	6	86	
	11	336	4	5	6			8	4	92		7	9		
3800	5	760	0	12	2	61		19	0	40		17	3	43	
	7	542	6	8	6		18	13	4		0	12	4		16
	9	422	2	6	8	62		10	5	95		9	7	88	
	11	345	5	5	7			8	7			8	0		
3900	5	780	0	12	2	62		19	0	41		17	3	44	
	7	557	1	8	6		56	13	4		5	12	4		28
	9	433	3	6	8	62		10	5			9	7	88	
	11	354	6	5	7			8	7	95		8	0		



4000	5	800	0	12	3	63	31	19	2	41	23	18	0	44	40
	7	571	3	9	0			13	6			12	6		
	9	444	4	7	0	63		10	7			10	0		
	11	363	7	5	8			8	9			8	2		
4100	5	820	0	12	4	64	4	19	2	42	26	18	1	45	5
	7	585	5	9	1			13	6			12	7		
	9	455	5	7	1	64		10	7			10	1		
	11	372	8	5	9			8	9			8	3		
4200	5	840	0	13	0	64	40	20	0	42	0	18	1	46	14
	7	600	0	9	2			14	2			13	0		
	9	466	6	7	2	65		11	1			10	1		
	11	381	9	5	10			9	1			8	3		
4300	5	860	0	13	1	65	10	20	0	43	0	18	3	46	22
	7	614	2	9	3			14	2			13	2		
	9	477	7	7	3	66		11	1			10	3		
	11	390	10	6	0			9	1			8	5		
4400	5	880	0	13	1	66	44	20	2	43	14	18	3	47	29
	7	628	4	9	3			14	4			13	2		
	9	488	8	7	3	66		11	3			10	3		
	11	400	0	6	0			9	3			8	5		
4500	5	900	0	13	2	67	11	20	2	44	12	19	0	47	35
	7	642	6	9	4			14	4			13	4		
	9	500	0	7	4	67		11	3			10	5		
	11	409	1	6	1			9	3			8	7		
4600	5	920	0	13	3	67	44	20	4	44	24	19	0	48	40
	7	657	1	9	5			14	6			13	4		
	9	511	1	7	5	68		11	5			10	5		
	11	418	2	6	2			9	5			8	7		
4700	5	940	0	13	4	68	8	20	4	45	20	19	2	48	44
	7	671	3	9	6			14	5			13	6		
	9	522	2	7	6	69		11	5			10	7		
	11	427	3	6	3			9	5			8	9		

4800	5	960	0	13	4	69	39	21	1	45	30	19	2	49	47
	7	685	5	9	6			15	1			13	6		
	9	533	3	7	6	69		11	7	106		10	7	97	
	11	436	4	6	3			9	7			8	9		
4900	5	980	0	14	0	70	0	21	1	46	24	19	3	50	0
	7	700	0	10	0			15	1			14	0		
	9	544	4	7	7	70		11	7	106		10	8	98	
	11	445	5	6	4			9	7			8	10		
5000	5	1000	0	14	1	70	30	21	3	46	32	20	0	50	0
	7	714	2	10	1			15	3			14	2		
	9	555	5	7	8	71		12	0	108		11	1	100	
	11	454	6	6	5			9	9			9	1		
5100	5	1020	0	14	1	71	59	22	0	46	40	20	0	51	0
	7	728	4	10	1			15	5			14	2		
	9	566	6	7	8	71		12	2	110		11	1	100	
	11	463	7	6	5			10	0			9	1		
5200	5	1040	0	14	2	72	16	22	0	47	30	20	1	51	49
	7	742	6	10	2			15	5			14	3		
	9	577	7	8	0	72		12	2	110		11	2	101	
	11	472	8	6	6			10	0			9	2		
5300	5	1060	0	14	3	72	44	22	2	47	36	20	3	51	47
	7	757	1	10	3			16	0			14	5		
	9	588	8	8	1	73		12	4	112		11	4	103	
	11	481	9	6	7			10	2			9	4		
5400	5	1080	0	14	3	73	71	22	2	48	24	20	3	52	44
	7	771	3	10	3			16	0			14	5		
	9	600	0	8	1	73		12	4	112		11	4	103	
	11	490	10	6	7			10	2			9	4		
5500	5	1100	0	14	4	74	24	22	4	48	28	21	0	52	40
	7	785	5	10	4			16	2			1	0		
	9	611	1	8	2	74		12	6	114		12	6	105	
	11	500	0	6	8			10	1			0	6		

		5	1720	0	15	0		22	4		21	0	
47	5600	7	800	0	10	9	74	16	2	49	15	0	53
		9	622	2	8	3	75	12	6	14	11	6	35
		11	509	1	6	9		10	4	114	9	6	105
		5	1140	0	15	1	75	23	1		21	2	
0	5700	7	814	2	10	6		16	4	49	15	2	53
		9	633	3	8	4	76	12	8	16	11	8	29
		11	518	2	6	10		10	6	116	9	8	107
		5	1160	0	15	1	76	23	1		21	2	
0	5800	7	828	4	10	6		16	4	50	15	2	54
		9	644	4	8	4	76	12	8	0	11	8	23
		11	527	3	6	10		10	6	116	9	8	107
		5	1180	0	15	2	76	23	3		21	4	
0	5900	7	842	6	11	0		16	6	50	15	4	54
		9	655	5	8	5	77	13	1	0	12	1	14
		11	536	4	7	0		10	8	118	9	10	109
		5	1200	0	15	2	77	24	0		21	4	
49	6000	7	857	1	11	0		17	1	50	15	4	55
		9	666	6	8	5	77	13	3	0	12	1	5
		11	545	5	7	0		10	10	120	9	10	109
		5	1220	0	15	3	78	24	4		22	0	
47	6100	7	871	3	11	1		17	0	51	15	5	55
		9	677	7	8	6	78	13	2	31	12	2	50
		11	554	6	7	1		10	9	119	10	0	110
		5	1240	0	15	4	78	24	1		22	2	
44	6200	7	885	5	11	2		17	0	51	16	0	55
		9	688	8	8	7	79	13	4	29	12	4	112
		11	563	7	7	2		11	0	121	10	2	
		5	1260	0	15	4	79	24	1		22	2	
40	6300	7	900	0	11	2		17	2	52	16	0	56
		9	700	0	8	7	79	13	4	8	12	4	112
		11	572	8	7	2		11	0	121	10	2	

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6400	5	1280	0	16	0	80		24	3	52		22	4	56	
	7	914	2	11	3		0	17	4		4	16	2		16
	9	711	1	8	8	80		13	6			12	6		
	11	581	9	7	3			11	2	123		10	4	114	
6500	5	1300	0	16	1	80		25	0	52		22	4	57	
	7	928	4	11	4		20	17	6		0	16	2		2
	9	722	2	9	0	81		13	8			12	6		
	11	590	10	7	4			11	4	125		10	4	114	
6600	5	1320	0	16	1	81		24	4	53		23	0	57	
	7	942	6	11	4		39	17	5		28	16	3		45
	9	733	3	9	0	81		13	7	124		12	7		
	11	600	0	7	4			11	3			10	5	115	
6700	5	1340	0	16	2	81		25	1	53		23	0	58	
	7	957	1	11	5		58	18	0		22	16	3		30
	9	744	4	9	1	82		14	0	126		12	7		
	11	609	1	7	5			11	5			10	5	115	
6800	5	1350	0	16	2	82		25	0	54		23	2	58	
	7	971	3	11	5		76	17	6		50	16	5		14
	9	755	5	9	1	82		13	8	125		13	0		
	11	618	2	7	5			11	4			10	7	117	
6900	5	1380	0	16	3	83		25	2	54		23	3	58	
	7	985	5	11	6		11	18	1		42	16	6		56
	9	766	6	9	2	83		14	1	127		13	1		
	11	627	3	7	6			11	6			10	8	118	
7000	5	1400	0	16	4	83		25	2	55		23	3	59	
	7	1000	0	12	0		28	18	1		15	16	6		38
	9	777	7	9	3	84		14	1	127		13	1		
	11	636	4	7	7			11	6			10	8	118	
7100	5	1420	0	16	4	84		25	4	55		24	0	59	
	7	1014	2	12	0		44	18	3		5	17	1		20
	9	788	8	9	3	84		14	3	129		13	3		
	11	645	5	7	7			11	8			10	10	120	



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7200	5	1440	0	17	0	84	60	26	0	55	50	24	0	60	0
	7	1028	4	12	1			18	4			17	1		
	9	800	0	9	4	85		14	4	130		13	3	120	
	11	654	6	7	8			11	9			10	10		
7300	5	1460	0	17	0	85	75	26	0	56	20	24	1	60	40
	7	142	6	12	1			18	4			17	2		
	9	811	1	9	4	85		14	4	130		13	4	121	
	11	663	7	7	8			11	9			11	0		
7400	5	1480	0	17	1	86	4	26	2	56	8	24	4	61	19
	7	1057	1	12	2			18	6			17	2		
	9	822	2	9	5	86		14	6	132		13	4	121	
	11	672	8	7	9			12	0			11	0		
7500	5	1500	0	17	2	86	18	26	3	56	52	24	2	61	58
	7	1071	3	12	3			19	0			17	3		
	9	833	3	9	6	87		14	7	133		13	5	122	
	11	681	9	7	10			12	2			11	1		
7600	5	1520	0	17	2	87	31	26	3	57	19	24	4	61	36
	7	1085	5	12	3			19	0			17	5		
	9	844	4	9	6	87		14	7	133		13	7	124	
	11	690	10	7	10			12	1			11	3		
7700	5	1540	0	17	3	87	44	27	0	57	5	24	4	62	12
	7	1100	0	12	4			19	2			17	5		
	9	855	5	9	7	88		15	0	135		13	7	124	
	11	700	0	8	0			12	3			11	3		
7800	5	1560	0	17	3	88	56	27	2	57	11	25	0	62	50
	7	1114	2	12	4			19	4			17	6		
	9	866	6	9	7	88		15	2	137		13	8	125	
	11	709	1	8	0			12	5			11	4		
7900	5	1580	0	17	4	88	68	27	1	58	12	25	0	63	25
	7	1128	4	12	5			19	3			17	6		
	9	877	7	9	8	89		15	1	136		13	8	125	
	11	718	2	4	1			12	4			11	4		

I II III IIII V VI VII VIII IX X XI XII XIII XIII XV XVI

8000	5	1600	0	17	4	89		27	2	58		25	1	63	
	7	1142	6	12	5		79	19	4		54	18	0		62
	9	888	8	9	8	89		15	2			14	0	126	
	11	727	3	8	1			12	5	137		11	5		
8100	5	1620	0	18	0	90		27	2	59		25	3	63	
	7	1157	1	12	6		0	19	4		17	18	2		36
	9	900	0	10	0	90		15	2			14	2	128	
	11	736	4	8	2			12	5	137		11	7		
8200	5	1640	0	18	1	90		27	3	59		25	3	64	
	7	1271	3	13	0		10	19	5		58	18	2		8
	9	911	1	10	1	91		15	3			14	2	128	
	11	745	5	8	3			12	6	138		11	7		
8300	5	1660	0	18	1	91		28	0	59		25	4	64	
	7	1185	5	13	0		19	20	0		40	18	3		44
	9	922	2	10	1	91		15	5	140		14	3	129	
	11	754	6	8	3			12	8			11	8		
8400	5	1680	0	18	2	91		28	0	60		25	4	65	
	7	1200	0	13	1		28	20	0		0	18	3		15
	9	933	3	10	2	92		15	5	140		14	3	129	
	11	763	7	8	4			12	8			11	8		
8500	5	1700	0	18	2	92		28	1	60		26	0	65	
	7	1214	2	13	1		36	20	1		40	18	4		50
	9	944	4	10	2	92		15	6			14	4	130	
	11	772	8	8	4			12	9	141		11	9		
8600	5	1720	0	18	3	92		28	3	60		26	2	65	
	7	1228	4	13	2		44	20	3		20	18	6		20
	9	955	5	10	3	93		15	8	143		14	6	132	
	11	781	9	8	5			13	0			12	0		
8700	5	1740	0	18	3	93		28	2	61		26	1	66	
	7	1242	6	13	2		51	20	2		38	18	5		54
	9	966	6	10	3	93		15	7	142		14	5	131	
	11	790	10	8	5			12	10			11	10		

I II III III V VI VII VIII IX X XI XII XIII XIII XV XVI

8800	5	1760	0	18	4	93	58	28	4	61	16	26	2	66	22
	7	1257	1	13	3			20	4			18	6		
	9	977	7	10	4	94		16	0			14	6		
	11	800	0	8	6			13	1	144		12	0	132	
8900	5	1780	0	18	4	49	64	29	0	61	55	26	4	66	56
	7	1271	3	13	3			20	5			19	1		
	9	988	8	10	4	49		16	1			14	8		
	11	809	1	8	6			13	2	145		12	2	134	
9000	5	1800	0	19	5	49	70	29	0	62	10	26	4	67	22
	7	1285	5	13	4			20	5			19	1		
	9	1000	0	10	5	95		16	1			14	8		
	11	818	2	8	7			13	2	145		12	2	134	
9100	5	1820	0	19	0	95	75	29	1	63	48	27	0	67	55
	7	1300	0	13	4			20	6			19	2		
	9	1011	1	10	5	95		16	2			15	0		
	11	827	3	8	7			13	3	146		12	3	135	
9200	5	1840	0	19	1	95	80	29	1	63	2	27	0	68	20
	7	1314	2	13	5			20	6			19	2		
	9	1022	2	10	6	96		16	2			15	0		
	11	836	4	8	8			13	3	146		12	3	135	
9300	5	1860	0	19	1	96	84	30	0	62	0	27	1	68	52
	7	1328	4	13	5			21	3			19	3		
	9	1033	3	10	6	96		16	6			15	1		
	11	845	5	8	8			13	7	150		12	4	136	
9400	5	1880	0	19	2	96	88	29	4	63	13	27	3	68	16
	7	1342	6	13	6			21	2			19	5		
	9	1044	4	10	7	97		16	5			15	3		
	11	854	6	8	9			13	6	149		12	6	138	
9500	5	1900	0	19	2	97	91	29	3	64	28	27	2	69	47
	7	1357	1	13	6			21	1			19	6		
	9	1055	5	10	7			16	4			15	2		
	11	863	7	9	9	97		13	5	148		12	5	137	

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9600	5	1920	0	19	3	97		30	0	64		27	4	66	
	7	1371	5	13	7		94	21	3			19	6		
	9	1066	6	10	0	98		16	6		0	15	4	139	9
	11	872	8	8	10			13	7	150		12	7		
9700	5	1940	0	19	3	98		30	0	64		28	0	69	
	7	1385	5	14	0		96	21	3		36	20	0		40
	9	1077	7	10	8	98		16	6	150		15	5	140	
	11	881	9	8	10			13	7			12	8		
9800	5	1960	0	20	0	98		30	3	64		28	0	70	
	7	1400	0	14	2		0	21	6		8	20	0		0
	9	1088	8	11	1	100		17	0	153		15	5	140	
	11	890	10	9	1			13	10			12	8		
9900	5	1980	0	20	0	99		30	2	65		28	1	70	
	7	1414	2	14	2		0	21	5		20	20	1		30
	9	1100	0	11	1	100		16	8	152		15	6	141	
	11	900	0	9	1			13	9			12	6		
10000	5	2000	0	20	0	100		30	3	65		28	4	69	
	7	1428	4	14	2		0	21	6		55	20	4		64
	9	1111	1	11	1	100		17	0	153		16	0	144	
	11	909	1	9	1			13	10			13	1		
10100	5	2020	0	20	1	100		30	3	66		28	2	71	
	7	1442	6	14	3		0	21	6		2	20	2		18
	9	1122	2	11	2	101		17	0	153		15	7	142	
	11	918	2	9	2			13	10			12	10		
10200	5	240	0	20	2	100		30	4	66		28	3	71	
	7	1457	1	14	4		0	22	0		36	20	3		47
	9	1133	3	11	3	102		17	1	154		15	8	143	
	11	927	3	9	3			14	0			13	0		
10300	5	2060	0	20	1	101		31	3	65		28	3	72	
	7	1471	3	14	3		99	22	4		30	20	3		4
	9	1144	4	11	2	101		17	5	158		15	3	143	
	11	936	4	9	2			14	4			13	0		



I II III IIII V VI VII VIII IX X XI XII XIII XIII XV XVI

10400	5	2080	0	20	2	101	98	31	0	67	15	28	4	72	32
	7	1485	5	14	4			22	1			20	4		
	9	1155	5	11	3	102		17	2			16	0	144	
	11	945	5	9	3			14	1	155		13	1		
10500	5	2100	0	20	2	102	96	31	1	67	48	29	0	72	60
	7	1500	0	14	4			22	2			20	5		
	9	1166	6	11	3	102		17	3	156		16	1	145	
	11	954	6	9	3			14	2			13	2		
10600	5	2120	0	20	3	102	94	31	3	67	14	29	0	73	15
	7	1514	2	14	5			22	4			20	5		
	9	1177	7	11	4	103		17	5	158		16	1	145	
	11	963	7	9	4			14	4			13	2		
10700	5	2140	0	20	3	103	91	32	0	67	0	29	1	73	42
	7	1528	4	14	5			22	6			20	6		
	9	1188	8	11	4	103		17	7	160		16	2	146	
	11	972	8	9	4			14	6			13	3		
10800	5	2160	0	20	4	103	88	32	1	67	13	29	2	73	69
	7	1542	6	14	6			23	0			21	0		
	9	1200	0	11	5	104		17	8	161		16	3	147	
	11	981	9	9	5			14	7			13	4		
10900	5	2180	0	20	4	104	84	32	0	68	20	29	2	74	2
	7	1557	1	14	6			22	6			21	0		
	9	1211	1	11	5	104		17	7	160		16	3	147	
	11	990	10	9	5			14	6			13	4		
11000	5	2200	0	21	0	104	80	32	1	68	52	29	3	74	48
	7	1571	3	15	0			23	0			21	1		
	9	1222	2	11	6	105		17	8	161		16	4	148	
	11	1000	0	9	6			14	7			13	5		
11100	5	2220	0	21	0	105	75	32	0	69	60	29	3	75	0
	7	1585	5	15	0			22	6			21	1		
	9	1233	3	11	6	105		17	7	160		16	4	148	
	11	1009	1	9	6			14	6			13	5		

I II III IIII V VI VII VIII IX X XI XII XIII XIV XV XVI

11200	5	2240	0	21	1	106		32	2	69		29	4	75	
	7	1600	0	15	1		70	23	1		22	21	2		25
	9	1244	+	11	7	107		18	0	162		16	5	149	
	11	1018	2	9	7			14	8			13	6		
11300	5	2260	0	21	1	106		32	1	70		30	3	75	
	7	1614	2	15	1		64	23	0		30	21	3		50
	9	1255	5	11	7	105		17	8	161		16	6	150	
	11	1027	3	9	7			14	7			13	7		
11400	5	2280	0	21	2	106		33	0	69		30	0	76	
	7	1628	4	15	2		58	43	+		15	21	3		0
	9	1266	6	11	8	107		18	3	165		16	6	150	
	11	1036	+	9	8			15	0			13	7		
11500	5	2300	0	21	2	107		32	4	70		30	1	76	
	7	1642	6	15	2		51	23	3		20	21	4		24
	9	1277	7	11	8	107		18	4	164		16	7	151	
	11	1044	5	9	8			14	10			13	8		
11600	5	2320	0	21	3	107		33	0	70		30	2	76	
	7	1628	4	15	3		44	23	4		50	21	5		48
	9	1288	8	12	0	108		18	3	165		16	8	152	
	11	1054	6	9	9			15	0			13	9		
11700	5	2340	0	21	3	108		33	2	70		30	3	76	
	7	1671	3	15	3		36	23	6		10	21	6		72
	9	1309	0	12	0	108		18	5	167		17	0	153	
	11	1063	7	9	9			15	2			13	10		
11800	5	2360	0	21	4	108		33	1	71		30	3	77	
	7	1681	5	15	4		28	23	5		14	21	6		19
	9	1311	1	12	1	109		18	4	166		17	0	153	
	11	1072	8	9	10			15	1			13	10		
11900	5	2380	0	21	4	109		33	2	71		30	4	77	
	7	1700	0	15	4		19	23	6		43	22	0		42
	9	1322	2	12	1	109		18	5	167		17	1	154	
	11	1081	9	9	10			15	2			14	0		

I II III III V VI VII VIII IX X XI XII XIII XIV XV XVI

12000	5	2400	0	22	0	109	10	33	4	71	1	31	0	77	65
	7	1714	2	15	5			24	1			22	1		
	9	1333	3	12	2	110		18	7			17	2		
	11	1090	10	10	0			15	4			14	1		
12100	5	2420	0	22	0	110	0	33	3	72	4	31	0	78	10
	7	1728	4	15	5			24	0			22	1		
	9	1344	4	12	2	110		18	6			17	2		
	11	1100	0	10	0			15	3			14	1		
12200	5	2440	0	22	0	110	100	33	4	72	32	31	1	78	32
	7	1742	6	15	5			24	1			24	2		
	9	1355	5	12	2	110		18	7			17	3		
	11	1109	1	10	0			15	4			14	2		
12300	5	2460	0	22	1	110	90	34	5	72	60	31	2	78	54
	7	1757	1	15	6			24	2			22	3		
	9	1366	6	12	3	111		18	8			17	4		
	11	1118	2	10	1			15	6			14	3		
12400	5	2480	0	22	1	111	79	34	2	72	16	31	3	78	76
	7	1771	3	15	6			24	4			22	4		
	9	1377	7	12	3	111		19	1			17	5		
	11	1127	3	10	1			15	7			14	4		
12500	5	2500	0	22	2	111	68	34	1	73	17	32	0	78	20
	7	1785	5	16	0			24	3			22	6		
	9	1388	8	12	4	112		19	0			17	7		
	11	1136	4	10	2			15	6			14	6		
12600	5	2520	0	22	2	112	56	34	2	73	44	31	4	79	39
	7	1800	0	16	0			24	4			22	5		
	9	1400	0	12	4	112		19	1			17	6		
	11	1145	5	10	2			15	7			14	5		
12700	5	2540	0	22	3	112	44	34	3	73	71	31	0	79	60
	7	1814	2	16	1			24	5			22	6		
	9	1411	1	12	5	113		19	2			17	7		
	11	1154	6	10	3			15	8			14	6		

D.I.

I II III IIII V VI VII VIII IX X XI XII XIII XIII XV XVI

12800	5	2560	0	22	3	113		34	2			32	0	80	
	7	1828	4	16	1		31	24	4	74		22	6		0
	9	1422	2	12	5	113		19	1		72	17	7	160	
	11	1163	7	10	3			15	7	172		14	6		
12900	5	2580	0	22	4	113		34	4			32	1	80	
	7	1842	6	15	2		38	24	6	74		23	0		20
	9	1433	3	12	6	114		19	3		24	17	8	161	
	11	1172	8	10	4			15	9	174		14	7		
13000	5	2500	0	22	4	114		35	0			32	2	80	
	7	1857	1	16	2		4	25	0	74		23	1		40
	9	1444	4	12	6	114		19	4		50	18	0	162	
	11	1181	9	10	4			15	10	175		14	8		
13100	5	2620	0	22	4	114		34	4			32	1	81	
	7	1871	3	16	2		104	24	6	75		23	0		59
	9	1455	5	12	6	114		19	3		50	17	8	161	
	11	1190	10	10	4			15	9	174		14	7		
13200	5	2640	0	23	0	114		35	1			32	2	81	
	7	1885	5	16	3		90	25	1	75		25	1		78
	9	1466	5	12	7	115		19	5		0	18	0	162	
	11	1200	0	10	5			16	0	176		14	8		
13300	5	2660	0	23	0	115		35	2			32	4	81	
	7	1900	0	16	3		75	25	2	75		23	3		16
	9	1477	7	12	0	115		19	6		25	18	2	164	
	11	1209	1	10	5			16	1	177		14	10		
13400	5	2680	0	23	1	115		35	1			32	3	82	
	7	1914	2	16	4		60	25	1	76		25	2		34
	9	1488	8	12	8	116		19	5		24	18	1	163	
	11	1218	2	10	6			16	0	176		14	9		
13500	5	2700	0	23	1	116		35	2			32	4	82	
	7	1928	4	16	4		44	25	2	76		25	3		52
	9	1500	0	12	8	116		19	6		48	18	2	164	
	11	1227	3	10	6			16	1	177		14	10		



13600	5	2720	0	23	2	116		35	3	76		33	0	82	
	7	1942	6	16	5		28	25	3		72	23	4		70
	9	1511	1	13	0	117		19	7			18	3	165	
	11	1236	4	10	7			16	2	178		15	0		
13700	5	2740	0	23	2	117		36	0	76		33	0	83	
	7	1671	3	16	5		11	25	5		30	23	4		5
	9	1522	2	13	0	117		20	0	180		18	3	165	
	11	1245	5	10	7			16	4			15	0		
13800	5	2750	0	23	2	117		35	4	77		33	1	83	
	7	1971	3	16	5		111	25	4		17	23	5		22
	9	1533	3	13	0	117		19	8	179		18	4	166	
	11	1254	6	10	7			16	3			15	1		
13900	5	2780	0	23	2	117		36	0	77		33	2	83	
	7	1987	1	16	6		94	25	5		40	23	6		39
	9	1544	4	13	1	118		20	0	180		18	5	167	
	11	1263	7	10	8			16	4			15	2		
14000	5	2800	0	23	3	118		36	1	77		33	3	83	
	7	2000	0	16	6		76	25	6		63	24	0		56
	9	1555	5	13	1	118		20	1	181		18	6	168	
	11	1272	8	10	8			16	5			15	3		
14100	5	2820	0	23	4	118		36	3	77		33	2	84	
	7	2014	2	17	0		58	25	1		9	23	6		72
	9	1566	6	13	2	119		20	3	183		18	5	167	
	11	1281	9	10	9			16	7			15	2		
14200	5	2840	0	23	4	119		36	2	78		33	4	84	
	7	2028	4	17	0		39	26	0		4	24	1		4
	9	1577	7	12	7	119		20	2	182		18	7	169	
	11	1290	10	10	9			16	6			15	4		
14300	5	2860	0	24	0	119		36	3	78		33	0	84	
	7	2042	6	17	1		20	26	1		26	24	2		20
	9	1588	8	13	3	120		20	3	183		18	8	170	
	11	1300	0	10	10			16	7			15	5		

	I	II	III	III V	VI	VII	VIII	IX	X	XI	XII	XIII	XIII	XV	XVI
14400	5	2880	0	24	1	119		36	4			33	4	85	
	7	2057	1	17	2		1	26	2	78		24	1		
	9	1600	0	13	4	120		20	4		48	18	7	169	35
	11	1309	1	11	0			16	8	184		15	4		
14500	5	2900	0	24	0	120		37	0			34	0	85	
	7	2071	3	17	1		100	25	3	78		24	2		
	9	1611	1	13	3	120		20	5		70	18	8	170	50
	11	1318	2	10	10			16	9	185		15	5		
14600	5	2920	0	24	1	120		36	4			34	1	85	
	7	2085	5	17	2		80	26	2	79		24	3		
	9	1622	2	13	4	121		20	4		64	19	0	171	65
	11	1327	3	11	0			16	8	184		15	6		
14700	5	2940	0	24	1	121		37	1			34	2	85	
	7	2100	0	17	2		59	26	4	79		24	4		
	9	1633	3	13	4	121		20	6		6	19	1	172	80
	11	1336	4	11	0			16	10	186		15	7		
14800	5	2960	0	24	2	121		37	0			34	2	86	
	7	2114	2	17	3		38	26	3	80		24	4		8
	9	1644	4	13	5	122		20	5		0	19	1	172	
	11	1345	5	11	1			16	9	185		15	7		
14900	5	2980	0	24	2	122		37	1			34	3	86	
	7	2128	4	17	3		16	26	4	80		24	5		
	9	1655	5	13	5	122		20	6		20	19	2	173	22
	11	1354	6	11	1			16	10	186		15	8		
15000	5	3000	0	24	2	122		37	2			34	4	86	
	7	2142	6	17	3		116	26	5	80		24	6		
	9	1666	6	13	5	122		20	7		40	19	3	174	36
	11	1327	3	11	1			17	0	187		15	9		
15100	5	3020	0	24	3	122		37	3			34	3	87	
	7	2157	1	17	4		94	26	6	80		24	5		
	9	1672	7	13	6	123		20	8		60	19	2	173	49
	11	1372	8	11	2			17	1	188		15	3		

15200	5	3040	0	24	3	123		38	0	80		34	+	87	
	7	2171	3	17	4		71	27	1		0	24	6		
	9	1688	8	13	6	123		21	1	190		19	3	62	
	11	1581	9	11	2			17	3			15	9	174	
15300	5	3060	0	24	4	123		37	3	81		35	0	87	
	7	2185	5	17	5		48	26	6		73	25	0		
	9	1700	0	13	7	124		20	8	188		19	4	75	
	11	1390	10	11	3			17	1			15	10	175	
15400	5	3080	0	24	4	124		38	0	81		35	0	88	
	7	2200	0	17	5		24	27	1		10	25	0		
	9	1711	1	13	7	124		21	1	190		19	4	0	
	11	1400	0	11	3			17	3			15	10	175	
15500	5	3100	0	25	0	124		38	1	81		35	1	88	
	7	2214	2	17	6		0	27	2		29	25	1		
	9	1722	2	13	8	125		21	2	191		19	5	12	
	11	1409	1	11	4			17	4			16	0	176	
15600	5	3120	0	25	0	124		38	0	82		35	2	88	
	7	2228	4	17	6		100	27	1		20	25	2		
	9	1733	3	13	8	125		21	1	190		19	6	24	
	11	1418	2	11	4			17	3			16	1	177	
15700	5	3140	0	25	0	125		38	1	82		35	3	88	
	7	2242	6	17	6		71	27	2		38	25	3		
	9	1744	4	13	8	125		21	2	191		19	7	36	
	11	1427	3	11	4			17	4			16	2	178	
15800	5	3160	0	25	1	125		38	2	82		35	2	89	
	7	2257	1	18	0		50	27	3		56	25	2		
	9	1655	5	14	0	126		21	3	192		19	6	47	
	11	1436	4	11	5			17	5			16	1	177	
15900	5	3180	0	25	1	126		38	3	82		35	3	89	
	7	2271	3	18	0		24	27	4		74	25	3		
	9	1766	6	14	0	126		21	4	193		19	7	178	
	11	1445	5	11	5			17	6			16	2	58	

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16000	5	3200	0	25	1	125	124	39	0	82	10	35	4	89	69
	7	2284	4	18	0			27	6			25	4		
	9	1777	7	14	0			21	6			19	8		
16100	11	1454	6	11	5	126	78	17	8	195	81	16	3	179	80
	5	3220	0	25	2			38	3			36	0		
	7	2300	0	18	1			27	4			25	5		
16200	9	1788	8	14	1	127	71	21	4	193	15	20	0	180	0
	11	1453	7	11	6			17	6			16	4		
	5	3240	0	25	2			39	0			36	0		
16300	7	2314	2	18	1	127	44	28	6	83	32	25	5	90	10
	9	1800	0	14	1			21	6			20	0		
	11	1472	8	11	6			17	8			16	4		
16400	5	3260	0	25	3	128	16	39	1	83	20	36	1	90	20
	7	2328	4	18	2			28	0			25	6		
	9	1811	1	14	2			21	7			20	1		
16500	11	1481	9	11	7	128	116	17	9	196	36	16	5	181	29
	5	3280	0	25	3			39	0			36	1		
	7	2242	6	18	2			27	6			25	6		
16600	9	1822	2	14	2	128	88	21	6	84	52	20	1	181	38
	11	1490	10	11	7			17	8			16	5		
	5	3300	0	25	3			39	1			36	1		
16700	7	2357	1	18	2	128	59	28	0	84	68	25	6	91	47
	9	1833	3	14	2			21	7			20	1		
	11	1500	0	11	7			17	9			16	5		
16800	5	3320	0	25	4	129	88	39	2	84	52	36	2	91	38
	7	2371	3	18	3			28	1			26	0		
	9	1844	4	14	3			21	8			20	2		
16900	11	1509	1	11	8	129	59	17	10	197	68	16	6	182	47
	5	3340	0	25	4			39	3			36	3		
	7	2385	5	18	3			28	2			26	1		
17000	9	1855	5	14	3	129	59	22	0	129	68	20	3	183	47
	11	1518	7	11	8			17	0			16	7		
	5	3360	0	25	5			39	4			36	4		



16800	5	3360	0	26	0	129		40	1	84		36	4	91	
	7	2400	0	18	4		30	28	2		0	26	2		
	9	1866	6	14	4	130		22	2	200		20	4	184	56
	11	1527	3	11	9			18	2			16	8		
16900	5	3380	0	26	0	130		39	3	85		36	3	92	
	7	2414	2	18	4		0	28	2		70	26	1		
	9	1877	7	14	4	130		22	0	198		20	3	183	64
	11	1536	4	11	9			18	0			16	7		
17000	5	3400	0	26	0	130		40	0	85		36	4	92	
	7	2428	4	18	4		100	28	4		0	26	2		
	9	1888	8	14	4	130		22	2	200		20	4	184	72
	11	1545	5	11	9			18	2			16	8		
17100	5	3420	0	26	1	130		40	1	85		37	0	92	
	7	2442	6	18	5		70	28	5		15	26	3		
	9	1900	0	14	5	131		22	3	201		20	5	185	80
	11	1554	6	11	10			18	3			16	9		
17200	5	3440	0	26	1	131		40	0	86		37	1	92	
	7	2457	1	18	5		39	28	4		0	26	4		
	9	1911	1	14	5	131		22	2	200		20	6	186	88
	11	1563	7	11	10			18	2			16	10		
17300	5	3460	0	26	2	131		40	1	86		37	1	93	
	7	2471	3	18	6		8	28	5		14	26	4		
	9	1922	2	14	6	132		22	3	201		20	6	186	2
	11	1572	8	12	0			18	3			16	10		
17400	5	3480	0	26	2	131		40	0	87		37	2	93	
	7	2485	5	18	6		108	28	4		0	26	5		
	9	1933	3	14	6	132		22	2	200		20	7	187	9
	11	1572	8	12	0			18	2			17	0		
17500	5	3500	0	26	2	132		40	3	86		37	3	93	
	7	2500	0	18	6		76	29	0		42	26	6		
	9	1944	4	14	6	132		22	5	203		20	8	188	16
	11	1590	10	12	0			18	5			17	1		

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17600	5	3520	0	20	3	132		40	2	87		37	2	94	
	7	2514	2	19	0			23	6		26	26	5		
	9	1955	5	14	7	133	44	22	4			20	7	187	22
	11	1600	0	12	1			13	4	202		17	0		
17700	5	3540	0	26	3	133		40	3	87		37	3	94	
	7	2528	4	19	0		11	29	0		39	26	6		
	9	1966	6	14	7	133		22	5			20	8	188	28
	11	1509	1	12	1			18	5	203		17	2		
17800	5	3560	0	26	3	133		40	4	87		37	4	94	
	7	2542	6	19	0		111	29	1		52	27	0		
	9	1977	7	14	7	133		22	6			21	0	189	34
	11	1618	2	12	1			18	6	204		17	2		
17900	5	3580	0	26	4	133		41	0	87		38	0	94	
	7	2556	8	19	1		78	29	2		65	27	1		
	9	1988	8	14	8	134		24	7			21	1	190	40
	11	1627	3	12	2			12	7	205		17	3		
18000	5	3600	0	26	4	134		40	4	88		37	4	95	
	7	2571	3	19	1		44	29	1		48	27	0		
	9	2000	0	14	8	134		22	6	204		21	0	189	45
	11	1636	4	12	2			18	6			17	2		
18100	5	3620	0	26	4	134		41	0	88		38	0	95	
	7	2585	5	19	1		10	29	2		60	27	1		
	9	2011	1	14	8	135		22	5			21	1	190	50
	11	1645	5	12	2			18	7	205		17	2		
18200	5	3640	0	27	0	134		41	1	88		38	1	55	
	7	2600	0	19	2		110	29	3		72	27	2		
	9	2022	2	15	0	135		22	8	206		21	2	191	55
	11	1654	6	12	3			18	8			17	4		
18300	5	3660	0	27	0	135		41	2	88		38	2	95	
	7	2614	2	19	2		75	29	5		84	27	5		
	9	2033	3	15	0	135		22	0	207		21	5	192	60
	11	1663	7	12	3			18	9			17	5		

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18400	5	3680	0	27	1	135		41	+	88		38	1	96	
	7	2629	5	17	3		40	29	6		8	27	2		64
	9	2044	4	15	1	136		23	2	209		21	2	191	
	11	1672	8	12	4			19	0			17	4		
18500	5	3700	0	27	1	136		41	2	89		38	2	96	
	7	2642	4	17	3		4	29	4		77	27	3		68
	9	2055	5	15	1	136		23	0	207		21	3	192	
	11	1681	9	12	4			18	9			17	5		
18600	5	3720	0	27	1	136		41	3	89		38	3	96	
	7	2657	1	17	3		104	29	5		88	27	4		72
	9	2065	5	15	1	136		23	1	208		21	4	193	
	11	1690	10	12	4			18	10			17	6		
18700	5	3740	0	27	2	136		42	0	89		38	4	96	
	7	2926	6	19	4		68	30	0		10	27	5		76
	9	2077	7	15	2	137		23	3	210		21	5	194	
	11	1700	0	12	5			19	1			17	7		
18800	5	3760	0	27	2	137		42	1	89		38	3	97	
	7	2685	5	19	4		31	30	1		21	27	4		79
	9	2088	8	15	2	137		23	4	211		21	4	193	
	11	1709	1	12	5			19	2			17	6		
18900	5	3780	0	27	2	137		42	0	90		38	4	97	
	7	2700	0	19	4		131	30	0		0	27	5		82
	9	2100	0	15	2	137		23	3	210		21	5	194	
	11	1718	2	12	5			19	1			17	7		
19000	5	3800	0	27	3	137		42	1	90		39	0	97	
	7	2714	2	19	5		94	30	1		10	27	6		85
	9	2111	1	15	3	138		23	4	211		21	6	195	
	11	1727	3	12	6			19	2			17	8		
19100	5	3820	0	27	3	138		42	2	90		39	1	97	
	7	2728	4	19	5		86	30	2		20	28	6		88
	9	2122	2	15	3	138		23	5	212		21	7	196	
	11	1736	4	12	6			19	3			17	9		

19200	5	3840	0	27	4	138		42	3	90		39	0	98	
	7	2742	5	19	6		18	30	3		30	27	6		
	9	2133	3	15	4	139		23	6	213		21	6	195	90
	11	1747	5	12	7			19	4			17	8		
19300	5	3860	0	27	4	138		42	2	91		39	1	98	
	7	2757	1	19	6		118	30	2		8	28	0		
	9	2144	4	15	4	139		23	5	212		21	7	156	92
	11	1754	6	12	7			19	3			17	9		
19400	5	3880	0	27	4	139		42	3	91		39	2	98	
	7	2771	3	19	6		79	30	3		17	28	1		
	9	2155	5	15	4	139		23	6	213		21	8	197	94
	11	1763	7	12	7			19	4			17	10		
19500	5	3900	0	28	0	139		42	4	91		39	3	98	
	7	2787	5	20	0		40	30	4		26	28	2		
	9	2155	5	14	6	140		23	7	214		22	0	198	96
	11	1772	8	12	8			19	5			18	0		
19600	5	3920	0	28	0	140		42	3	92		39	2	99	
	7	2800	0	20	0		0	30	3		4	28	1		
	9	2177	7	14	6	140		23	6	213		22	0	197	97
	11	1509	1	12	8			19	4			17	10		
19700	5	3940	0	28	0	140		42	4	92		39	3	99	
	7	2814	2	20	0		100	30	4		12	28	2		
	9	2182	2	14	6	140		23	7	214		22	0	198	98
	11	1790	10	12	8			19	5			18	0		
19800	5	3960	0	28	1	140		43	0	92		39	3	100	
	7	2828	4	20	1		60	30	5		20	28	2		
	9	2200	0	15	6	141		23	8	215		22	0	198	0
	11	1800	0	12	9			19	6			18	0		
19900	5	3980	0	28	1	141		42	3	93		39	4	100	
	7	2842	6	20	1		19	30	3		91	28	3		
	9	2211	1	15	6	141		23	6	213		22	1	199	0
	11	1809	1	12	9			19	4			18	1		



[illegible]



## A generall reconing.



**B**V T nowe for further declaration of that which hath bene hitherto said, and of that which is nowe to to be spoken of, for the quicke & readye arming of a battaile, presupposing firste by the afoze sayde to ables, the length & breadth of that battaile, it is to be noted, as I suppose for the firste waye, where in suche sorte of footemen be founde in a raye that all the Pikes of all the Companies, be set together in the middeste of all the armed Pikes of all the Companies, that is, that the one part of these armed pikes do go before, and the other behinde the whole raye.

Or else, to make a moze faire muster, as is wont to be done in marching after this other sorte, that the vnarmed Pikes of euery particuler compaignye haue one parte of their armed Pikes, that are in that particuler Compaignye before, and the other behinde.

Or else after an other maruailous order, as at what time the Capitayne doth commaunde, that firste there go suche a quantitie of armed Pikes before the whole raye, and that there do remaine as manye moze behinde the same raye, that maye be sufficiente to arme, according to the Proportion of the reste of the armed Pikes, the two flankes of the battaile: and that the middle parte be deuided into so manye maniples, or partes as we will call them, as with theyr armed Pikes before and behinde, they may make one with an other, the entiere length of the same battaile, if neede were to reduce them together. And of all these aboue sayde sortes of arming readye, here following shalbe made a generall reconing, which shall serue for anye number of footemen, that are to be set in a battaile, and to be quickly armed.

## A generall reconing.

**N**ow let vs put the case, that there were. 5000. footemen of vnarmed Pikes, and 1450. armed with Colletes, which are in all. 6450. the which would be reduced into a square battaile of ground, this being a moze profitable waye, than that of people, thou shalt enter the tables, in the first Columnne, taking. 6450. of the number most neare vnto it, because it scilleth little if it be. 6400. and ouer against. 6400. in the sixtenth Columnne, thou shalt find that the battaile ought to be 56. in length, and 114. in breadth. And in the sixtenth Columnne thou shalt finde an ouerplus of 16. footemen, where the same battaile shall be set, the which. 16. footemen, thou shalt ad to the. 50. that did excede of the abovesaid 6450. footemen, and they will make. 66. footemen. After thou shalt see how many times the length of the battaile (being considered from best to back) which is 56. is to be found in this number of 66. and thou shalt finde it once, & an ouerplus of. 10. footemen, & for this one time, that the number. 56. is found in. 66. there shall be one added to the breadth of the battaile, & they shall make. 115. footemen in breadth from shoulder to shoulder. And thus thou shalt haue the battaile. 56. ranches long, and 115. footemen in a ranche broad: as is to be seen by this figure: & there excedeth 10. footemen, the which ten I do not place in the battaile.

The figure of the generall reconing.

Broad 115. footemen in a ranche.

Long 56. ranches.





*of the generall reconing.*

**A**nd who that desireth to knowe further : the  
6450. footemen, do marche in araye (as ex-  
perte warriors will haue it by odde numbers)  
from. 3. the lesser number, vnto. 11. the greater, oꝝ  
binary in a rancke in bzeadth, soꝝ so manye ranches,  
as are to bee, supposing then that they marche by five  
in a rancke, seeke in the seconde Colunne, the nom-  
ber of five and ouer againste it in the third Colunne,  
thou shalt finde that there oughte to bee. 1280. ranches.  
But because there is not to be founde in the tables, o-  
ther then the number of 6400. thou shalt take that whi-  
che is the ouerplus, that is 50. it will make 10. ranches  
more, the which thou shalt adde to the 1280. ranches, and  
they will make 1290. ranches: thus 6450. footemen go-  
ing in araye by 5. in a rancke, shalbe 1290. ranches, the  
like is to be vnderstande of the rest. Besides thou shalt  
see howe manye ranches the 1450. armed pikes oughte  
to be in length, and howe manye doth excede ouer and  
aboue the ranches. In this sorte, thou shalt deuide those  
armed pikes by the bzeadth of the battaile, which is 115.  
therof shall come 12. ranches in length, and an ouerplus  
of 70. armed pikes, the which, because they do not make  
an entier rancke, are afterwarde placed in that part of  
the battaile, that shall seeme to the Margiant of greatest  
necessity: and thus thou shalt finde that where the whole  
battel ought to be 56. ranks long: & that the armed pikes  
are 12. ranches, it remayneth that the length of the vnar-  
med ought to bee 44. ranches, the which shall bee in the  
middest. The like reconing is to be made, if any will  
make a square battaile of number of people: not so  
much soꝝ to see the length and bzeadth with the armed  
ranches, and that whiche doth excede both within and  
without of this battaile, of a number of 5000. vnarmed  
footemen, and of 1450. armed with Co:stettes, as also of  
what soeuer other number, be it greater, oꝝ lesser then  
the aboue sayde.

*f. y.*

*The*

## Examples.

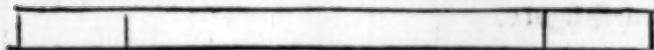
The whiche foze sayde reoning it is supposed that the generall doth know it, or some other person) to whome it doth appartayne to giue order of the maner, howe to arme the battayle: to the ende that hauing it in memo-rye, he may not staue vpon other, then to commaunde his Captaynes, or Seargiantes to set the same in a reedinessse, as in the examples following shalbe shewed.

### ¶ The first example.

**N**ow in case there bee a number of 6450 footmen betwene armed and vnarmed Pikes, and that the vnarmed bee 1450. And the vnarmed 5000. as is befoze set forth in the generall reoning, and that this number of footmen were with speede to be set into a battaile armed with Corsletts, it is necessary that the generall, or some other, haue well in minde the reoning of the length and breadth of the whole battayle, and seuerally of the armed and vnarmed Pikes, to the end that if occasion do hap. as I haue already sayd, none other is to be done, than to commit to his Seargiantes the order that they are to obserue in arming the battaile. And so let vs put the case that the length thereof be 56 rankes, at 115. footmen in a ranke in breadth, in this sorte, that is 12 rankes in lengthe of armed Corsletes, & an ouerplus of 70. armed footmen, & 44. rankes of vnarmed, as is to be seene befoze in the generall reoning. In arming of the which battayle, let vs presuppose the first aboue named manner: that is, when those people doe marche in aray, at as manye as they will in a ranke, as well in length, as in breadth, with the vnarmed Pikes in the midst, and all the armed Pikes, part set befoze and part behind: as in the first figure is to be seene.

## The first figure.

<sup>f</sup>  
A raze, where one parte of the armed Pikes doo  
goe before, and the other behind with the  
vnarmed Pikes in the midst.



Letting the readers to vnderstande, that the yellowe  
Colo<sup>r</sup>, dothe signifie the armed souldiers with Co<sup>r</sup>  
nettes, and the white the vnarmed. The whiche  
being supposed, there is committed to those armed ranks  
that goe before, that of them there be made seven ranks  
for the length, from best to backe, at 115. men for the  
breadth, from shoulder to shoulder, as by the seconde  
figure is made manifest.

## The seconde figure.

Breadth 115 men.

Long 7 ranks.



Straight after let 44 ranks of vnarmed Pike  
in length, be bestowed behind these armed ranks, at  
as many in a ranke in breadth, for so many as are in the  
raze, as you see to be in the thirde figure.

## The thirde figure.

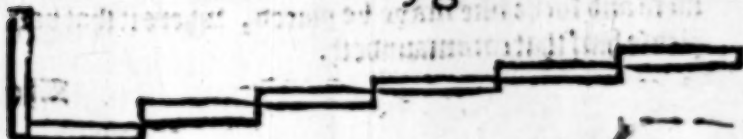


Fig.

## *Examples.*

**A**ND so 44 other ranches of the next that are spoken of, shall approche in maner as is already sayd, doing orderly the like vnto the ende of the whole aray of the vnarmed Pikes: because in this sort the whole battaile shall come to be framed, as you haue an example by the fourth figure.

### *The fourth figure.*

**B**rode 115. footemen in a rancke



**W**hen the raye of the vnarmed Pikes shall be thus framed & made into a battaile, from best to backe after the armed Pikes at the head of the battaile, as is aboue saide. A raye of armed Pikes shall be caused to march behind the vnarmed Pikes, making five ranches in length at the taile of the battaile, the whiche in thus doing, thou shalt finde to bee 56. ranches long, or as it pleaseth some to saye 56. men, and 115. men brode in a rancke, with seuen ranches of the armed Pikes at the head, and five ranches also of the same armed Pikes at the taile, as maye be seene set forth by the fift figure. wherein I do not put the tenne that do errede, because these and suche like maye be placed, where it shall best please him that commaundeth.

**The**



to arme a battaile.

*The fift figure.*

13,000 115. footemen in a ranche



**N**owe that one hath in this foote appointed his battaile as aboue, a couple expert in the art of warre shall go the one to the head, and the other to the taile, and take alwaye one or two ranches from the bzeadth of the battaile for the one, for to arme two flankes, that is, that each one of the take care to arme one flank: one ranche in bzeadth, both make two and somewhat more in length, if there were people there it woulde make little more then one: thus taking one ranche from the head, and an other from the taile, there shalbe two in a ranche for each flank, and so according to the number that shalbe taken alwaye in bzeadth, it shalbe double in length, wherefoze a battaile well appointed, woulde be double in bzeadth to the length, according to the iudgement of scilfull warriors, as well auncient as moderate.

And thus we will suppose that there is taken from the headde, and from the taile two ranches according to the iudgement of him, that shall arme the two flankes of the battaile, or more or lesse, as occasion shal happen, and thus the battaile shalbe 52. rankes long at 123. foote,

men

## Exampels.

men in breadth for euery ranche, and there doth ex-  
cede tenne footemen, which are not in the bodie of the  
battayle, with fīue ranches of armed Pikes at the head,  
and thre ranches at the tayle, with foure in a ranche to  
the two flanches of the armed Pikes, in such soyle as is  
sene ordered by the sixt figure.

### The sixte figure.

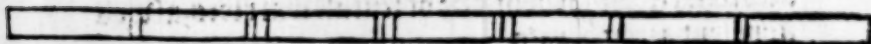
Brode 1 2 3, footemen in a ranche

Long 52. ranches.



### The seconde example.

BEing willing to arme a battayle quickly, according  
to the seconde maner aboue sayd, in marching com-  
panie by companie of euery perticuler Captayne, and  
that eache companie haue the one halfe of their armed  
Pikes at the head, and the other at the tayle: The which  
maye be cypressly sene by the seuenth figure.



A Raye wherein there goeth companie by companie,  
with the one halfe of their armed Pikes at the head  
and the other at the tayle.

Sup.

## *Examples to arme a battaile.*

**S**upposing therfore to haue in minde the selfe same  
 abonesayde reconding, and that there are pct. 5000.  
 footemen of vnarmed Pikes, and. 1450 footemen  
 armed with Cozletttes, with 56. in length, and 115. in  
 breadth of the battaile, with seuen ranches of footemen  
 armed with Cozletttes at the heade, and fve ranches at  
 the taile of the same, none other is to be done, but to  
 committe to eache one of the Capitaines, that they do  
 make with theyr armed and vnarmed Pikes 56. ranches,  
 setting seuen ranches of those armed with Cozletttes  
 at the heade, and fve ranches at the taile. And if any  
 Capitayne did lacke people to make the ranches. 56. he  
 shall ioyne with another Capitaine, so that betwene the  
 two they maye make 56. ranches, putting the ranches  
 of thone to the shoulder of the ranches of the other, in such  
 sorte as by this eight figure we haue drawne forth that  
 it shoulde be.

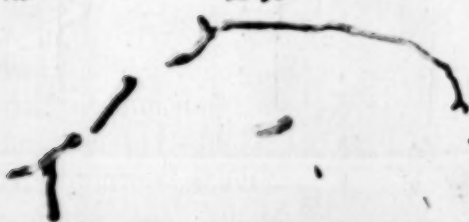
### *The eight figure.*



**A**ND they shal make the battaile. 56. ranches long  
 at a 115. footemen in a ranke in breadth, with seuen  
 ranches of armed Pikes at the heade, and fve ranches  
 at the taile: as in the fiste, seuenth, and this ninth figure  
 may be seene.

G.i.

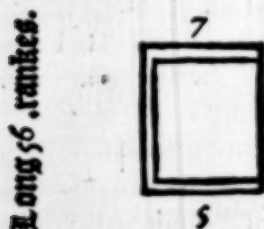
The



# *Examples to arme a battaile.*

## *The ninthe figure.*

Bzoade 115. fwtemen in a rancke.



**T**HICH battaile being ordered as you see: and being willing to arme the two flankes thereof, the same shalbe done, that is done in the first figure: And thus the battaile shalbe 52. ranckes long, at 123. fwtemen in a rancke bzoad, with five ranckes of armed Pikes at the headd, and three ranckes at the taylor, and fortye fwtemen in a ranck of the armed Pikes to each of the two flankes, as by the tenth figure wee haue set forth a forme befoze your eyes.

## *The tenth figure.*

Bzoade. 123. fwtemen in a rancke.



The



## *Examples to arme a battaile.*

### *The thirde example.*

**N**owe there remaineth for vs to arme a number of people, set in the abouesayde thirde sozte. That is, within the raye both go maniple by maniple, that is, that one parte of the armed footemen, that ought to arme the two flankes of the entiere battaile, are deuised into two, and one parte goeth befoze all the maniples, and the other behinde: and that beside, that euery maniple hath one parte of his particuler armed Pikes befoze, and one part behinde, in such sozte as the armed and vnarmed Pikes of this, suche a maniple going in aray, is to the iust length of the battaile: The whiche let it be sayde of all the other maniples.

And for to order with reason these soztes of maniples, this is to be done, let vs suppose that the armed & vnarmed Pikes, are to the number aboue witten, with a determination to reduce the battaile to the selfe same length & bzeadth, and that you will haue them to go in aray by fve in a rancke in bzeadth, you shall deuide þ bzeadth of the battaile of the vnarmed Pikes. Pikes whiche is 115, as maye be seene aboue, by fve, thereof shall come 22 maniples, and an ouerplus of thre. And thus euery maniple shalbe. 52, ranckes long, at 5. footemen in a rancke, with 5. ranckes of armed footemen at the head, and 3. ranks at the taile, letting you to wit that, þ thre ouerplus of 22. shal make in like sozt a maniple in length: as here aboue, from thre footemen in a rancke in bzeadth, with fve ranckes in lengthe of armed footemen at the headd, and thre at the taile: But because this maniple of thre in a rancke in bzeadth, commeth to be moze narrowe than the other maniples, thou for to cause that the raye maye go with an euennesse. shalte cause this maniple to go by fve in a rancke in bzeadth: as in the eleuenth figure is to be founde.

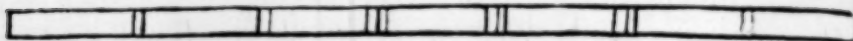
C.ii

The



## *The eleuenth figure.*

*The* way wherein both go maniple by maniple, one part of the armed Pikes at the headde, and the other parte at the tayle of the maniples.



**B**ecause these maniples happening after to be set in battaile, they shalbe set by thre in a rancke in breadth, and straighte there shalbe ioyned vnto them the rest of the battaile: the whiche being needefull to reduce into forme, none other is to be done, but that the armed Pikes, that do marche befoze the whole maniples, do stretche them selues forth to folwe in a rancke in breadth, making .52. ranckes in length, for a flanke of the battaile: as in the twelfth figure maye clearly be perceyued.

## *The twelfth figure.*

Broadde. 4. footemen in a rancke:

Long. 52. ranckes.

The first flanke.

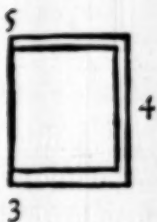


**A**d to cause after that the maniples be drawn forth to the shoulder of this flanke, the one being armed to the side of the other. As in the thirtieth figure is shewed forth vnto vs.

## The thirtenth figure.

Bzoade 119. footemen in a rancke

Long 52. ranckes.

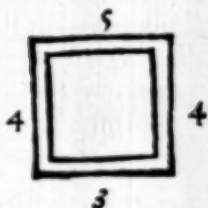


**A**ND they shall make the battaile. 52 ranckes long at. 119. footemen in a rancke in bzeadth. with one flanke armed, at solwe in a rancke. as in the thirtenth figure it is oꝛdered. And this being done the armed Pikes shall followe, as they maye go behind the whole raze of the armed and vnarmed Pikes: And they shall be stretched forth likewise to solwe in a rancke from the other flanke. And the battaile shall come to be. 52. ranckes long at. 123. footemen in a rancke in bzeadth, with five ranckes of armed Pikes at the heade, and thre at the taile, with solwe in a rancke of the armed Pikes to the two flankes, as by the soyme in the fouretenth figure is to be shewed.

## The fouretenth figure.

Bzoade. 123. footemen in a rancke.

Long 52. ranckes.

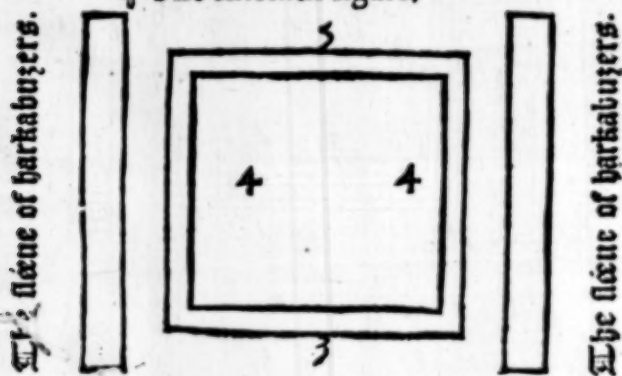


With

## *Examples to arme a battaile.*

**W**ith aduice that the Ansignes would be set and vnited together in the middest of the battaile: or else ouerthwart the same: and as it shall seem most best in making them most sure, and well warded. It remayneth that we do intreat howe to make the flæues of the barkabuzers, and wings of the horsemen. Advising first eache one that doth reade this, that althoughe hitherto there is nothing spoken of barkabuzers, neuerthelesse it is to be supposed that from the beginning, befoze the people be set in aray, these barkabuzers, that is, that parte which goeth befoze, oughte to be the first to be there placed, and to make the flæue in suche sort, as it be as long, or moze, as neede requireth, as the length of the battaile is to be: and the which raye of barkabuzers is called a flæue. In this sort causing so many ranckes of the same barkabuzers to remayne of those, that is, that do marche befoze the raye of all the armed and vnarmed Pikers, as is the length of the battaile from 10. vnto fiftene footemen in a rancke, in breadth, and to the shoulder of this flæue, the battaile shal come to be fojmed with those armed Pikers rounde about, as is abouesaid, distant eight or twelue foote fro the flæue. And the rest of the barkabuzers that do marche behinde the armed and vnarmed Pikers, shall make an other flæue on the other flæke of the battaile, distante, in proportion to the first: as in the fiftenth figure appeareth.

¶ The fiftenth figure.



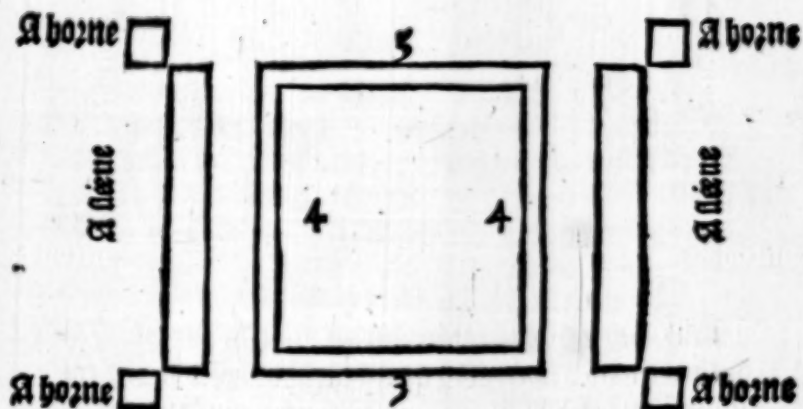


## Examples to arme a battaile.

**T**herof also aduertising the reader y<sup>e</sup> the græne colo<sup>r</sup> signifieth the harkabuzers, and the red, the men at armes, and the murreye the light hozsemen.

After at the head of these flæues, on the one side may be made hoznes of harkabuzers; as is in the sixteenth figure.

### The sixteenth figure.



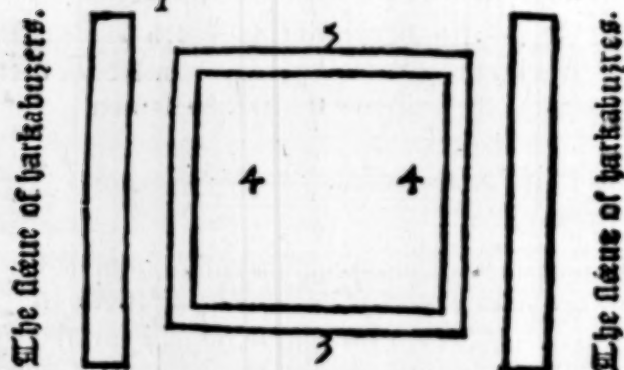
**A**d if by any meanes there shoulde excēde harkabuzers, they shalbe set togethers on one side for a succour to the hozsemē, or where it were most expediēt for the defence of them selues, or for the offence of the enemye. Not omitting to tell you, that the flæues of the harkabuzers maye be made moze long then is the battaile, as is abovesayde: in suche sort as they shoulde excēde beyonde the heade and tayle of the battaile, because they might serue for hoznes: as in the seuententh figure is to be founde.

### The seuententh figure.



# Examples to arme a bataille.

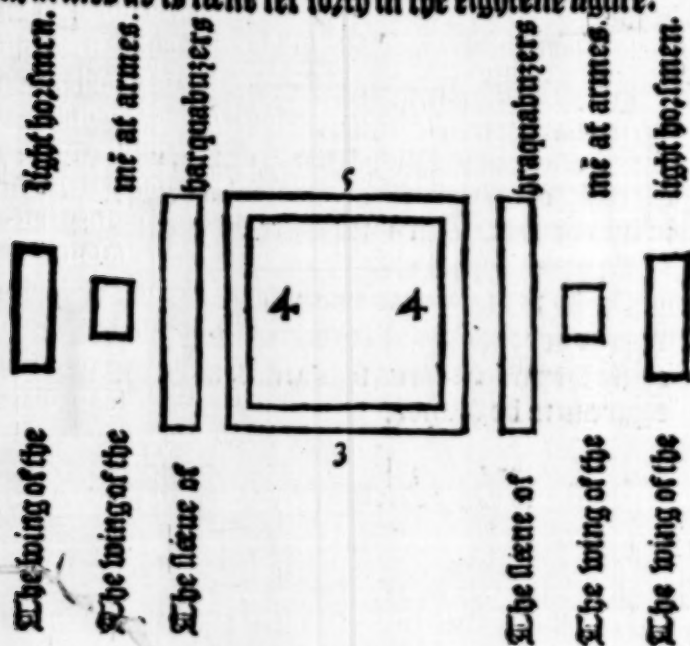
The. 17.  
figure.



The which last maner of making senees to a bataille is farre better then that aboue sayde, after let this bee looked for of the hoysmen, let it be kept for an accustomed order, that parte of them be set for winges of the bataille, and parte go discourring and looking to the passages: to the ende the generall be aduised of the whole doinges of the enemye.

The hoysmen at armes do make a wing to the bataille, and the light hoysmen do make a wing to the men at armes as is scene set forth in the eightene figure.

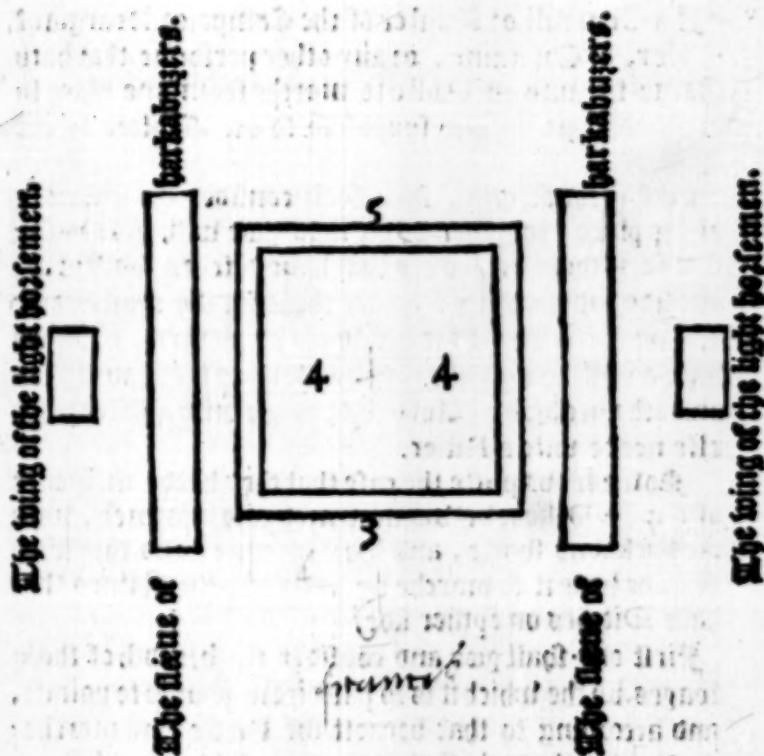
The. 18.  
figure.



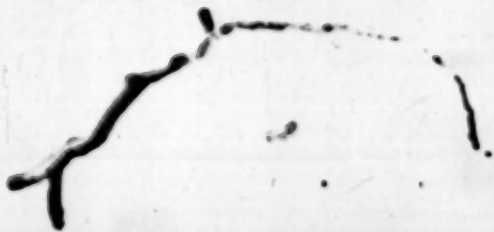
## Examples to arme a battaile.

**A** if by chaunce the men at armes were not, there shalbe set for winges a parte of the Light Horsemenne, and the other parte shall goe in betwix of the enemye: As is here expressed and set forth in the nineteenth figure.

### The nineteenth figure.



*Away to marche.*



## *A way to marche.*

**C**uing you warning of importaunce, that the Hozemen in fight be distaunte as muche as is possible from the battaile, leaste it shoulde be an occasion in retiring from the enemy, to breake the raze of the battaile.

Lastlye, putting you in minde that the Hozemen in their lodging woulde be as muche as is possible couered and warded by the footemenne because when they are to prepare them selues to armes, they are muche moze ower to be set in order, then are the footemen.

**I**f a Generall, or Maister of the Campe, or Seargiant aler, or Capitaine, or any other personne that hath charge to cause an Hoste to marche from one place to another, and that he supposeth to be assaulted by the enemye.

First suche an one, shall well consider the situation of the place, whyther as he is to goe with his Hoste: that is, if there be wayes that haue ditches, both of the one side and the other: as are those for the moste parte of Lombardy: or if he be to goe by plaines, or neare vnto a Hill, or by Hilles, or by Vallies that haue hilles on both sides, or by Wooddes, or neare vnto a Woodde, or else neare vnto a River.

Nowe let vs putte the case that they hadde an Hoste of 6450. Pikes, betwene armed and vnarmed, with the barkabus shotte, and Hozemenne, and that they woulde haue it to marche by wayes in the plaines that hath Ditches on eyther side.

First one shall goe and consider the breadth of those wayes, by the which it is to passe from pointe to pointe, and according to that breadth the Hoste shall marche: And putte the case that one part of the waye be 15. fote broade, the Hoste shalbe made to marche by 5. in a rancke: Because every footman wil haue thre fote in bread: and if you would knowe howe many ranches of



## *A way to marche.*

of footemen there are in. 6450. thou shalt decide. 6450. by 5. thereof shall come. 1290. ranckes, & so these footemen shall go by 5. in a rancke, vntill suche time as the waye bee founde moze bzoade. or moze narrowe, and there the waye shall be measured agayne, and the reckoning shall be made as befoze, so to see howe many footemen go in a rancke, and howe many ranckes there are: Causing parte of the barkabus shotte to marche befoze the raye, and parte behinde, and another to go in succoure of Horsemen, that go in betwix of the passages, and the imbushments, with the whole doinges of the enemye. And let another parte bee so; a Vantgarde and Retrogarde to the raye, to be able to serue them at neede, and another parte go alwaies at the flankes of the raye, whiche are passed the ditches on the one and the other side of the waye, because the bankes of the ditches shall serue them so; a countermure: when the Horsemen of the enemye should come to sette vppon the flankes of the raye. And if there were men at armes, I would that they should marche on bothe sides of the raye, and also of the barkabuzers, that doe marche by the flankes of the battaile, or raye: And if there were no menne at armes, I would that a parte of the Light Horsemen, should serue in stede of the menne at armes, as is aboue sayde, because one parte of the Light Horsemen doe serue so; Scouts, bothe befoze and behinde the raye: but yet in departing from theyr place, I would that they should saue to go some other waye, then to that place whereunto they purposed to go. And alwayes when the hooke marcheth, I would haue abundaunce of Labourers to make places plaine, to cast downe Bridges, to make defences, and other necessarye thinges that are required in marching.

H. y.

And



## *Away to marthe.*

And also perfect good guides, that are very well practised in the Countrey: & if it marche by the plaines, let the same order be kept, that is spoken of aboue, except the Pikes, I woulde that they shoulde marche in battayle: And if the hoste did marche neare vnto a hill, it shall keepe the Pikes in battaile as muche as maye bee, according to the greatenes of the waye: and sende of the light horsemen, and of harquabuzers to ouer looke the hill, to the ende the enemye take not the toppe of the hill from them, and in the rest to followe as is sayde in the first order.

And if it did marche ouer an hill, to keepe the Pikes in battayle asmuche as is possible, and let parte of the light horsemen, and harquabuzers, go beewing the hill well, to the ende the enemye take not the toppe of the hill from them, and the rest to followe as in the first order.

And if it marche throughe a valleye betwene two hilles, there shalbe sente Light Horsemen and harquabuzers to eyther hyl to beewe very it well, to the ende the enemye take not the toppe of those hilles from them, and in the rest to followe as in the first order.

And if it marche through Wooddes, to keepe the Pipes asmuche as is possible in battaile, and to sende of the Light Horsemen and harquabuzers, to beewe all partes of the Woodde verie diligentlye, and so; the rest to keepe the order after the first waye.

And if it marche neare vnto a Woodde, some shall go to beewe the Woodde verie well, causing one parte of the harquabuzers to marche by the flankes of the araye on the Woodde side, and the reste to followe as in the first order.

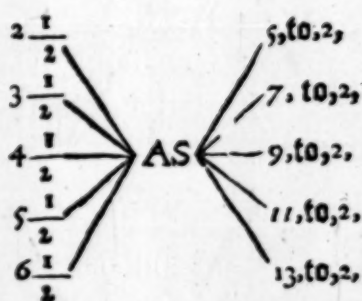
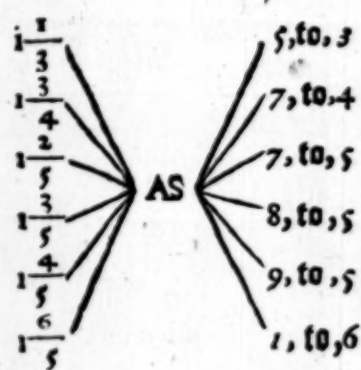
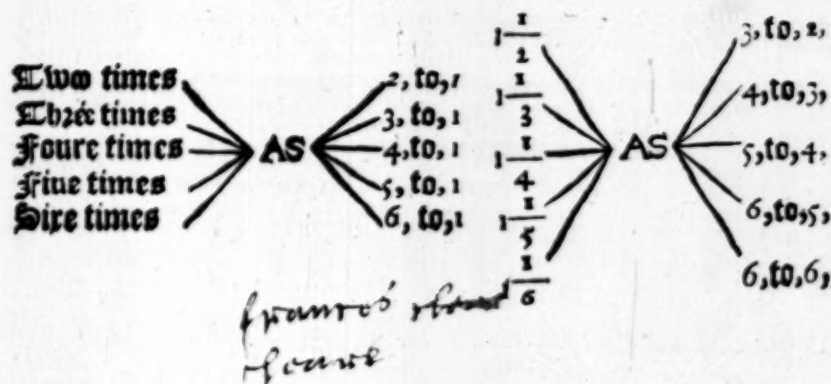
And if it marche neare to a Ryuer, you shall do as is sayde, so; the marching neare a woodde, and in the rest to followe, as is appointed in the first waye, the baggage shall marche on the side where is least suspicion of the enemye, vnder they; owne ensigne.

Let-

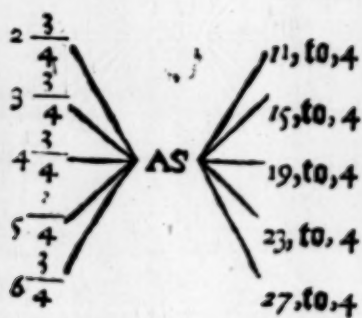
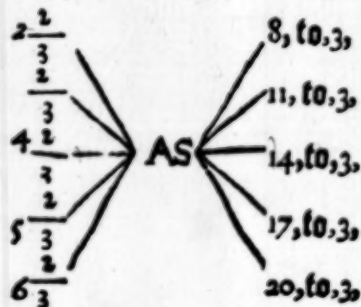
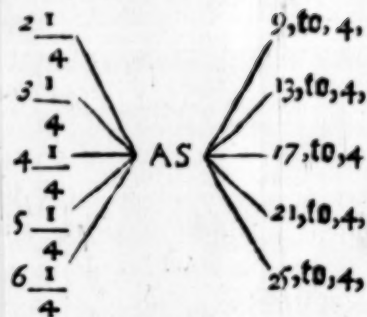
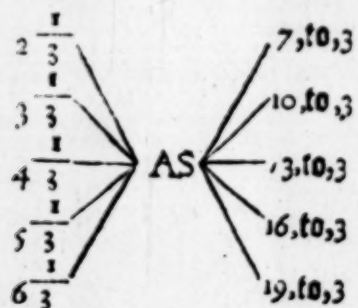
# A way to marche.

Letting you also to wit, that if it shall go to any enterprise under the colour of one spye, there oughte not to be geuen suche credite to the spye, but that it goeth well provided and warpe, because many times spyes are double.

If you will make a battayle, that the breadth maye haue what propozcion you will to the length, as for example, I woulde haue my battaile two times more large then long of men, thre, folwe, fiue, sixe, one and a halfe, one and a thirde, one and a folwthe, one and a fiste, or in any other propozcion, as heare vnderneath shalbe declared.



# Away to marche.





## *Examples to arme a battaile.*

Having nowe set fo: the the prepozitions that maye  
happen in setting of sundrye battailes, heare following  
shalbe declared, howe to knowe them, and also how they  
are to be vsed in setting the same battailes.

First for to knowe the prepozitions, as one would saye,  
3 would knowe what prepozition 3. is to 2. comparing  
the greater whiche is 3. to the lesser whiche is 2. 3. the  
greater shalbe deuided by 2. the lesser, whercof cometh  
 $1\frac{1}{2}$  that is, the greater is one and a halfe moze in  
prepozition, then is the lesser: And if you compare the  
lesser whiche is 2. to 3. the greater, it shalbe sayde  $1\frac{1}{2}$  and  
 $\frac{1}{2}$  that is, the lesser is one & a halfe lesser in prepoziti-  
on, then is the greater: In like sort if you would know  
the prepozition of 19. to 4. where the greater is compa-  
red to the lesser, 19. the greater, shalbe deuided by 4.  
the lesser, whercof both come 4. and  $\frac{3}{4}$  thus 19. to 4.  
shall haue 4. and thre fourthes, in prepozition, that is.  
19. the greater both containe folwe and thre fourthes  
the lesser: And if you compare the lesser whiche is 4. to  
the greater, which is 19. 19. also the greater shalbe de-  
uided by 4. the lesser, whercof both come 4. and  $\frac{3}{4}$  and  
it shalbe sayde that 4. and thre fourthes lesser is contai-  
ned in the greater, that is, that the lesser, is folwe and  
thre fourthes lesse then the greater, & by this rule shalbe  
knowne the prepozition of any number to an other: Ha-  
ving already declared the prepozition of one number  
to an other. here vnderneath shalbe declared howe bat-  
tailes are to be made, in what prepozition soeuer one  
will.

For example, let vs put the case that one would  
make a battaile, whose breadth were two and one  
thirde, moze then the length, of men there shalbe set  
downe two numbers, that hath the prepozition of two

## *Examples to arme a battaile.*

and a thirde, as is aboue declared, which shalbe as 7. to 3. whose proportion shalbe 2 and  $\frac{1}{3}$  that is, two and a thirde: And because we will haue the breadth greater then the length: the lesser number shalbe taken for the firste, and the greater for the seconde, and the number of the people that are to be set in battaile, let vs put the case they were 6500. men betwene vnarmed Pikes, and Corletttes, as heereafter is to be seene.

The firste,

3

The seconde,

7

The thirde,

6500.

After let the seconde be multiplied by the thirde, that is, 6500. by 7. will make 45500, and 45500. shalbe deuided by three, which is the firste, and thereof shall come 15166, and there excēdeth 2. the which shalbe let goe, and no accounte to be made thereof at all, after there shalbe taken the square roote of 15166, which shalbe 123. in a ranke. & that which dothe excēde aboue the square roote, shalbe let go, as aboue, and for to haue the length of the battaile, the number of the men shalbe deuided, that is, 6500. by 123. the breadth of the battaile, thereof shall come 52. for the leangthe of the battaile, and 104. footemenne shall excēde, and 104. footemenne are twoo times 52. and there excēdeth neuer a footeman, and if there did excēde any, they shoulde be footemenne, which are not to be accompted in the battaile: but yet for the seruice thereof, and two shalbe ioyned in a ranke, which shall make 125. footemenne in a ranke: thus we shall haue our battaile 52. ranckes long at 125. footemenne in a ranke broad, which shall haue almoste the proportion of breadth to the length, as 7. to 3. for in deuiding 125. by 52. it maketh 2.  $\frac{2}{52}$  which is a litle more then 7. deuided by 3. which make 2, and a thirde: thus we shall saye that oure battaile is

## *Examples to arme a battaile.*

52. ranckes long, and 125. footemen in a rancke broade, as in a figure shalbe seene.

Another example, if you woulde make a battaile, that had the breadth to the leangthe, as 3. is to 1, that is, that the breadth were thre times moze then the leangth. we will set forth a rule, that is, one for the firste, 3. for the seconde, and the number of menne for the thirde, as beare vnderneath is to bee seene.

The first.

1.

The seconde.

3.

The third.

5600.

Nowe the seconde shalbe multiplied by the thirde, and it will make 16800. and 16800. shalbe deuided by the first, that is, 1. whereof shall come but 16800. because one dothe neyther deuide no, multiplie, and of 16800. we wil take the square roote which shalbe 129. and there dothe excede 159. whereof there is made no reconing. and 5600. which is the number of the people, shalbe deuided by 129. whereof doth come 43. which is the leangth. and there doth excede 53. men, 4 of the 53. men we will sette one in a rancke, whiche will make 43. ranckes at 130. footemen in a rancke, and there doth excede 10. footemen, as is seene here in this figure.

Broade 130. men in a rancke.

Long 43. ranckes.



1.

3.

## *Examples to arme a battaile.*

And this battaile abovesayde hathe his breauthe to his  
leangthe, as 3. is to 1. and these selfe same rules are to  
bee made in any sozte of battaile, and in any propozcion  
that you will. The whiche aduices, with many o-  
ther, entreated of by others, maye with  
the helpe of God, bying this parte  
of warfare enterpryses  
to a good ende.

FINIS.

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